



**DEBORAH CHU**  
*Junior Staffwriter*

This year's Midway Opening Ceremony for Spring Carnival paid a bittersweet farewell to its longstanding place on the Morewood Gardens parking lot. It touched on the new Tepper Quadrangle that would take its place, and reminded us of the philanthropy aspect of Carnival. True to Carnegie Mellon tradition, the air echoed with the sound of bagpipes as Carnival officially kicked off.

People huddled inside the large Alumni Association Tent on the Morewood Gardens parking lot while rain drizzled outside. Dean of Student Affairs Gina Casalegno joked that despite last year's announcement that Midway would not take place at the Morewood Gardens parking lot, 2015 would now be the final year before Midway moves to the College of Fine Arts Lawn.

"Spring Carnival at Carnegie Mellon will always have a home," Casalegno stated firmly.

Casalegno described this occasion as "momentous," drawing parallels between the all-encompassing essence of Spring Carnival and the interdisciplinary nature of the future Tepper Quadrangle. The Quadrangle is scheduled to be built on the Morewood gardens parking lot, making this occasion also a hand-off.

"[The Tepper Quadrangle] is a new chapter in our campus history that will bring together the whole of our campus ... where collaboration will reign," Casalegno said. "It will be a place where innovation will thrive."

As for Midway's new home on the CFA lawn, Casalegno points out that it would be closer to other Carnival activities such as Sweepstakes, more commonly known as Buggy. It would also be located at a more central location on campus, situated against a backdrop of the College of Fine Arts building and modernistic Hunt Library, which

See **MIDWAY**, A4

Graphic compiled by Anne Sophie Kim/Layout Manager

## 'Fight for 15' protestors call for higher wages



Workers from the surrounding Pittsburgh community joined together with Pittsburgh college students on Wednesday to advocate for higher wages.

**JUSTIN MCGOWN**  
*Contributing Editor*

Shortly after a closure for the University of Pittsburgh's annual Bigelow Bash, Bigelow Ave. was once again closed to traffic last Wednesday. This closure wasn't for a student event; instead a large crowd filled the cordoned-off street and rallied around a pickup truck. Speakers acted as a makeshift stage. The demonstration was just one of more than 200 across the country where fast food workers went on strike. Their demands were wages increase to \$15 an hour, and the formation of a union. The event was called "Fight for 15."

Members of several local unions showed solidarity with the fast food workers. Among the unions present were 32BJ SEIU security guards and employees of the University of Pittsburgh, including

adjunct professors, with the United Food and Commercial Workers Union Local 23, and many more. In addition to the

that focuses on producing socially conscious hip-hop with an emphasis on Pittsburgh's black community.

and talking over the din to his fellow demonstrators. Ellis said he had been part of the movement for about a year and that he was there that day because "It was time for a change."

"We want the same thing Martin Luther King did with what he did," Ellis said. "[It's] not just about the 15 and it's not just the union. It's about respect, dignity, and the right to organize."

Elizabeth Massey, who works at a Wendy's, said part of the reason for her presence was to send a reminder. "I'm here because if there were no me or them, there would not be any easy lunches, no medicine pick up ... I'm doing this for me and my son, who's six." Massey stressed that the support the strikers have had has been incredibly wide reaching, coming also from

**"Pittsburgh is America's most livable city, so why do we have to fight for a living wage?"**

— *Jasiri Oronde Smith,*  
local activist and emcee

unions, representatives of numerous places of worship, political organizations, student groups, and even the Westinghouse High School Marching Band attended.

Among those giving speeches from the back of the pickup was Jasiri Oronde Smith, who performs as Jasiri X. A local activist and emcee, Smith was there with IHood, a local media organization

## Carnival changes to come in 2016

**BRIAN TRIMBOLI**  
*Editor-in-Chief*

Last weekend's Spring Carnival, the university's 101st, was the last one to take place on the Morewood parking lot. Next year, Carnival will be spread across the College of Fine Arts (CFA) parking lot, the CFA lawn, and the Mall.

The Morewood parking lot, currently the site of Midway, will become unusable when construction for the upcoming Tepper Quadrangle breaks ground. Although construction was supposed to begin in March, it has been pushed back, allowing Carnival to stay on the Morewood parking lot this year.

The university announced plans for the Tepper Quadrangle in Nov. 2013 on the heels of a \$67 million donation by alumnus David Tepper, whose 2003 donation of \$55 million made him the namesake of the Tepper School of Business. Although plans for the Tepper Quadrangle have not been finalized, the university has selected an architecture firm — Moore Ruble Yudell Architects & Planners — to design the expansion.

The new space is also supported by about \$200 million of the university's own money and several smaller alumni donations. It will include a new building for the Tepper School of Business, a university welcome center, a technology-enhanced learning center for the Eberly Center, fitness and recreation spaces, and a 600-seat auditorium.

There are plans to keep some space for parking in the Tepper Quadrangle, but since the plans are not finalized it's unclear whether or not Carnival Midway will fit in the new space, according to Coordinator of Student Activities and advisor to Spring Carnival Tim Leonard. Next year, Leonard said via email, booths will be in the CFA parking lot, the main tent will

be on the CFA lawn, and the rides will be on the CFA lawn and the Mall. The Carnival concert will also take place on the Mall.

Although its likely that the rides will damage the lawn, "One of the reasons we want to use the CFA Lawn is its durability," Leonard continued by email. "We expect that there may be some damage to the lawn, but all of that is completely unknown and very weather dependent. We plan to use plywood to back onto the lawn and then use wood to disperse the weight of the rides so they don't sink into the ground. However, if this rains, it could get messy."

Rides will also be set up close to the sidewalk, Leonard said, to keep as much pedestrian traffic as possible off of the grass. "If damage does occur, we will most likely reseed the lawn, just like after Orientation. However, because Commencement is so close to Carnival, we will have to take extra care to make sure the appearance is appropriate for all of our families and guests coming to campus that weekend," Leonard said.

The CFA parking lot and lawn was only one of many spaces considered for Carnival, Leonard said. The list of potential locations also included Gesling Stadium, Morewood Avenue, Margaret Morrison Street, Doherty Parking Lot, the East-West walkway and Merson Courtyard, and the fourth floor of the East Campus Garage. Each of these sites, however, has its disadvantages. The turf of Gesling Stadium, for example, would have to be covered, a process that is cost prohibitive. Additionally, vehicles over 7 ft. tall cannot drive into the East Campus Garage, which would make move on difficult.

Vice President of Campus Affairs Michael Murphy, with help from Carnegie Mellon's

See **PROTEST**, A4

See **CHANGES**, A3



FEATURE PHOTO

# Students ‘dunk-a-cop’ on midway



Matthew Nielsen/Staff Photographer

Students throw balls at a dunk tank for Carnegie Mellon’s Spring Carnival Event “Dunk-a-cop” on Midway this past weekend.

NEWS IN BRIEF

## Researchers question gender representation

Three Carnegie Mellon scientists — professors of psychology Roberta Klatzky, Lori Holt, and Marlene Behrmann—recently questioned gender representation in the February 2015 special issue of *Cognition*, “The Changing Face of Cognition.” Klatzsky, Holt, and Behrmann wrote an opinion piece in *Cognition*, stating that they were “struck by the fact that among the 19 authors listed for the 12 articles, only one female author was present.” “As cognitive scientists, we know that subtle, even unconscious, biases shape decision making. We hope that by calling attention to the gender disparity in invited scientific contributions we can raise awareness and contribute to developing inclusive strategies,” Holt, who is also a member of the Center for the Neural Basis of Cognition (CNBC) said in a university news release. “It is very important that the new generation of women in cognitive science, and STEM fields generally, recognizes that their contributions are critical.” Carnegie Mellon’s own Department of Psychology, housed in the Dietrich College for Humanities and Social Sciences, has 26 full-time faculty members, 11 of whom are women. “The fate of women in science continues to be problematic and, although some progress has been made, many challenges remain,” Behrmann, co-director of the CNBC, said in the news release. “These challenges go beyond authorship and journals, and concerted efforts need to be mustered to address this issue of disproportionate gender distribution in cognitive science and in science more generally.”

## INI celebrates 25 years of network research

Students, alumni, and visitors to Carnegie Mellon saw The Fence painted during Carnival in honor of the 25th anniversary of the Information Networking Institute (INI). The INI offers graduate degrees to students in information networking, information security, and mobility and software management. These degrees teach students skills at the intersection of technology, economics, and secure networks and systems. “Today, the INI has more than 1,500 alumni who are in cross-functional positions and leadership roles around the globe,” said Director of the INI Dena Haritos Tsamitis in a university news release. “The INI is proud to showcase the accomplishments of its alumni, faculty and students in celebration of its 25th anniversary.” The INI was the first program of its kind in information networking through a partnership with Bellcore. During Carnival weekend, alumnus Hoorman Radfar (CIT ’04) gave a keynote to celebrate the anniversary. “Throughout its 25-year history, the INI has demonstrated relevance and agility in effectively delivering multiple interdisciplinary programs through a variety of innovative delivery models,” Tsamitis said in the release.

Compiled by  
BRIAN TRIMBOLI

WEATHER

TUESDAY	WEDNESDAY	THURSDAY
62° / 43°	57° / 37°	54° / 35°
FRIDAY	SATURDAY	SUNDAY
54° / 36°	58° / 36°	58° / 38°

Source: [www.weather.com](http://www.weather.com)

### Corrections & Clarifications

If you would like to submit a correction or clarification, please email The Tartan at [news@thetartan.org](mailto:news@thetartan.org) or [editor@thetartan.org](mailto: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.



# Statistically Speaking

This week was Carnegie Mellon’s 101st Spring Carnival, and the last Carnival to take place on the Morewood Gardens parking lot. Construction for the upcoming Tepper Quadrangle will break ground in the parking lot soon, and Carnival Midway will move to the College of Fine Arts parking lot and lawn. The theme of this year’s Carnival was Living Library, leading to booths inspired by works of literature ranging from children’s books to classic tomes.

8’x18’

The size of a blitz booth plot

1914

The first Carnival, then called May Day

18’x18’

The size of a full booth plot

Source: The Tartan, [cmucarnival.com](http://cmucarnival.com)

Compiled by  
BRIAN TRIMBOLI

INTERNATIONAL NEWS IN BRIEF

### Moscow, Russia

The Russian government has lifted a ban on arms supply to Iran, providing the Middle Eastern country with anti-missile systems on April 13. Additionally, Iran and Russia have agreed to barter over \$20 billion dollars worth of goods. This news comes during rising tensions in Iran’s Nuclear talks with western powers.

Sources: *Business Insider* and *Pavvand*.

### São Paulo, Brazil

The largest city in Brazil announced that certain areas have imposed martial law on its citizens. In an effort to fight dengue fever, which has broken out in the country, the government has soldiers going door-to-door on the streets in an effort to educate the populace about repelling mosquitoes.

Source: *The Wall Street Journal*

### Rome, Italy

400 Libyan refugees drowned off the coast of Italy on Tuesday. Second in highly publicized cases against Google, the latest charges follow the controversial case regarding the “Right to be forgotten” in 2010. Google claims to not have in any way violated European anti-trust laws.

Source: Reuters

### Brussels, Belgium

European Union antitrust regulators will take Google Inc. to court. Second in highly publicized cases against Google, the latest charges follow the controversial case regarding the “Right to be forgotten” in 2010. Google claims to not have in any way violated European anti-trust laws.

Source: *The Wall Street Journal*

### Anbar, Iraq

After losing the key city of Tikrit last week in Iraq, Islamic State fighters are pushing back in a counter offensive, attacking the Iraqi city of Anbar. This follows an Islamic State offensive against critical oil refineries in Baiji. Iraqi forces state “the situation in Anbar is critical,” and that the Islamic State will gain territory if proper reinforcements do not arrive.

Source: Reuters

Compiled by  
BRIAN WALSH





# Town hall participants discuss CMU's international programs



The town hall evaluated Carnegie Mellon's international strategy. In attendance were Jimmy Hsia, the vice provost for international programs and strategy, and Steve Kloehn, the vice president for marketing and communications.

**BRADEN KELNER**  
*Contributing Editor*

As campus members come closer to finalizing a strategic plan for the university's future, many gathered on Tuesday in the Posner Center for a town hall meeting focused on one aspect of the plan: Carnegie Mellon's international strategy.

A working group of 32 people across Carnegie Mellon colleges, programs, and campuses have been working to refine the main points of the international strategy through previous town halls and collaborations with students, faculty, and staff.

At the head of the international strategy working group is Vice Provost for International Programs and Strategy K. Jimmy Hsia, who introduced the presenting members of the working group.

Hsia and Vice President for Marketing and Communications Steve Kloehn together enumerated the goals of the town hall, which included voicing new issues and already identified ones, collecting ideas about Carnegie Mellon's strategic goals and international presence, and gathering ideas to meet those goals.

First, Director of the College of Engineering's Information Networking Institute Dena Haritos Tsamitis spoke

about the state of Carnegie Mellon's existing programs. Tsamitis noted that currently international programs operate under a decentralized model. In other words, individual Carnegie Mellon colleges typically maintain international programs independently of one another.

Best practices are also only passed on informally, and faculty standards differ among programs. For example, some faculty are hired specifically for the programs while others spend time at the main campus before becoming involved with international programs. There is a broad range of programs, most offering master's degrees, with varied sizes and ties to Carnegie Mellon's Pittsburgh campus.

Tsamitis asked attending members how Carnegie Mellon should measure the success and impact of international programs. Tsamatis also stressed how the university should plan for program sustainability, develop exit strategies, and measure opportunity costs.

Next, Manfred Paulini, a professor of physics, spoke about bringing Carnegie Mellon's cultural values to other campuses and programs, and vice versa. He asked the audience what the essentials of Carnegie Mellon's culture are, as well as what defines a

Carnegie Mellon experience.

He said that, at the main campus, further integration of U.S. and international students must occur. He noted that the university needs to identify international students' needs and address them with the appropriate resources.

Last, the town hall addressed a need to provide incentives for student, faculty, staff, and alumni to spend time at international locations.

"As an institution, we're definitely turning a corner in our relative view of thinking more about what is our net impact in the world, both as an institution and in the explosion of our graduates and alumni out into the world," said Vice President for Campus Affairs Michael Murphy from the audience.

Murphy asked those attending to ask themselves to what end programs and connections are being forged: "What good in the world can we do that we're not doing now?"

Assistant professor of physics Shirley Ho presented emerging international opportunities with Heinz College and Dietrich College for Humanities and Social Sciences associate teaching professor Joseph Mertz.

They asked how the university can distill its experience



Carnegie Mellon professors discussed the university's global strategies and programs.

# Changes anticipated in Spring Carnival 2016 rules

**CHANGES**, from A1

other vice presidents, made the final decision of Carnival's location.

The proposal for the new location, however, was the work of many parts of the university's administration, including the Office of Student Activities, the Division of Student Affairs, Risk Management, University Police, and Campus Design & Facility Management, among others. Several student organizations also contributed to the proposal, including the Spring Carnival Committee, AB Concerts, AB Tech, Sweepstakes, and any organization that typically builds a booth. Leonard also hosted a town hall

meeting to garner student opinions, and presented the proposed changes to Student Government.

The new location will not affect the rules for booth, Leonard said. "The plan as of right now is that there will be no major changes," Leonard noted in the email. "What will change drastically is the layout of Midway and how close the booths are to each other. However, that all depends on who wants to build next year. If we were to pick up Midway 2015 and move it the CFA Parking Lot, it would fit. However, we couldn't fit many more booths."

Now that the new location is finalized, Leonard said, Student Activities and the Spring

Carnival Committee can start doing more detailed analysis to determine what other adjustments will need to be made to the structure of Midway and the regulations of the Booths and Midway.

"I think my favorite part about Booth and about Carnival is the families walking through the Booths, and I think I'm worried that having them on the CFA parking lot and lawn will deter families from coming," junior electrical and computer engineering major and Booth Chair of Kappa Alpha Theta Rebecca Wolfinger said. "If families can still come, though, then there's no reason why CFA lawn won't still make for a successful Carnival experience."

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Carnegie Mellon Philharmonic

Andrés Cárdenes, Artistic Director

WED  
APR  
22

8pm

Carnegie Music Hall, Oakland

music.cmu.edu

Carnegie Mellon University School of Music





# Kiltie band, Carnival committee welcome 101st Carnival



The opening ceremony featured speeches from Spring Carnival Committee members senior communication design major and Head of Design and Marketing for Spring Carnival Sam Ahmed (bottom left), and senior chemical engineering major and Booth Chair Hannelie Mostert (top right).

**MIDWAY**, from A1

often lights up at night in colors.

Toward the end of her speech, Casalegno said to the audience, “You all should be very proud of your efforts and in bringing to the Carnegie Mellon campus this wonderful weekend”.

Casalegno concluded by

cutting the ribbon to Midway’s entrance. The Carnegie Mellon Pipes and Drums pipe band played several songs. A couple members of the Spring Carnival Committee then took the stage to speak about the philanthropy of Carnival.

Senior communication design major and head of design and marketing for Spring Carnival Sam Ahmed commented,

“As head of marketing, something I’ve really been trying to do this year is bringing Carnival to a position where we can give back to the community.”

Ahmed spoke about this year’s philanthropy partner, Habitat for Humanity of Greater Pittsburgh, an organization that aims to eliminate “substandard housing in Allegheny County and to

make decent shelter a matter of conscience and action,” according to its website. The organization builds and restores homes with the help of local volunteers, low-income families (for whom the homes are being built), and donations.

Ahmed pointed out two different ways that people could donate. One way is to vote for a favorite booth by placing

money in its corresponding donation box. The second way to donate would be through a [crowdrise.com](#) campaign, which could be found either online at the Carnegie Mellon Spring Carnival Facebook page or at [www.crowdrise.com/cmucarnival](#).

As the ceremony concluded with performances by the Kiltie Band, audience members

began to stream out of the tent to peruse the newly opened booths on Midway.

The finale of the ceremony marked the beginning of a long weekend filled with campus-wide events involving both current students and alumni, a weekend that would provide a breather for students who were ready to relax and have fun.

# ‘Fight for 15’ protest advocates for higher minimum wages



Protestors in Schenley on Wednesday rallied to raise the minimum wage to what they call a livable wage. The protest lasted until nearly 6 p.m. that evening, and then spurred more discussions.

**PROTEST**, from A1

non-Pittsburghers. Massey specifically mentioned an out-of-towner from Philadelphia coming to volunteer their car for the cause.

She was convinced that the day’s activities would have an impact, saying, “I believe we will make it.” This sentiment was echoed around 5 p.m. when the protest turned into a march, pushing on to Forbes Avenue and halting traffic.

A further police cordon was set up at the intersection of Forbes and Meyran Avenues, which the protesters slowly marched toward.

The Westinghouse Marching Band took the lead, while the protesters unfurled banners and waved signs demanding higher wages and respect, for the most part — A few signs bore statements associated with the Black Lives Matter movement. Also carried was a puppet in the like-

ness of Greg Peaslee, UPMC’s senior vice president for human resources.

When the protesters reached Meyran Ave., they abruptly turned left and crowded around the entrance to the Iroquois Building. There, they posted “public notices” revoking UPMC’s charity status, and chanted “UPMC you are not a charity!”

Continuing onward to the McDonald’s on Forbes, the protesters began sitting down

to chants of “Whose streets? Our streets!”

Rev. Rodney Lyde of the Baptist Temple Church addressed the crowd there and reiterated points about the fact that Pittsburgh, named the most livable city by the media, still had income inequality and poverty. He also cheered the groups’ success in marching.

“I thought McDonald’s is supposed to be open 24 hours a day,” he said to the crowd

sitting on the pavement in front of the shuttered restaurant, “But this doesn’t look too open. I do believe we shut it down!”

After his address the crowd began moving again until it returned to Schenley Plaza, near where the march had begun earlier in the day. There, the chief organizer of the event, Bempoma Pieterston, a political science and communications major at the University of Pittsburgh, thanked all of the

participants in the march and declared it a rousing success.

“They were begging us to get out of the street,” she told the assembled strikers, protesters, and onlookers. “We backed the traffic all the way up to the parkway.”

The assembly began breaking up around 6 p.m., though many stayed in the plaza to discuss both the day’s event and what actions they might take in the future to accomplish their goal.





# Science & Technology

## Students receive STEM awards

JULIA NAPOLITANO  
Asst. SciTech Editor

Recently, Congress has awarded two Carnegie Mellon undergraduate students, Joshua Kubiak and Jillian Jaycox, with prestigious Barry M. Goldwater Scholarships. Congress established the Barry M. Goldwater Scholarship and Excellence in Education Program in 1986 to provide college students support in pursuing a research career in science, mathematics, and engineering.

Kubiak is a junior materials science and engineering and chemistry double major. He is also a research assistant in the lab of Michael Bockstaller, a materials science and engineering professor at Carnegie Mellon, investigating improved methods for creating quantum dot backlights for LCD screens. On campus, Kubiak is a member of Engineers Without Borders, the Carnegie Mellon racing team, and is president-elect of Chem-E Car.

“I am honored to receive the award and thankful for the research opportunities that CMU made available to me starting in my first semester of college,” Kubiak said. “I am also very excited to continue research as a senior and eventually as a graduate student in materials science and engineering.”

Kubiak intends to complete a Ph.D. in material science engineering and “investigate novel polymeric materials for alternative energy generation and teach as a university professor.”

Jaycox is a junior biological sciences major. She conducts research with Sarah Gaffen, an immunology

See **AWARD**, A6



Braden Kelner/Contributing Editor

## Researchers study responses to morphine

JOSH BROWN  
Staffwriter

Although it can be unpleasant, pain is a necessary sensation that informs us when something is wrong. However, when that sensation becomes unbearable, the nerve impulses that cause pain must be inhibited; that is where drugs such as morphine come into play. Morphine and its derivatives are classified as opioids, which are pain-relieving substances. Opioids also happen to be addictive; psychological dependence can develop within a few doses. The body also builds up resistance to opioids rapidly, requiring a higher dosage to effectively alleviate pain.

Such characteristics of

opioids have lead researchers to pursue methods to circumvent both the resistance and addictive response of the body to these drugs. Researchers at Carnegie Mellon have recently tackled this subject in an effort to better understand the mechanisms by which neurons become resistant to opioids. The team consists of Manojkumar Puthenveedu, assistant professor of biological sciences at Carnegie Mellon, and researchers employed in his lab, including Shanna Bowman, Amanda Soohoo, and Daniel Shiwardski, doctoral candidates in biological sciences at Carnegie Mellon. The group tested neuronal response to various substances to determine what mechanisms are at work in

neurons as they become increasingly resistant to opioid stimulation.

Put simply, when a body experiences pain, a peptide, or small protein, called Substance P activates a receptor on the surface, or soma, of a neuron. Opioid molecules counteract the pain sensation by binding to mu-opioid receptors on the neuron's surface. There are a few other types of opioid receptors, but since the “mu” in mu-opioid refers to morphine, these receptors were the best study specimens. The signal is internalized, and it initiates a cascade of signals within the cell which inhibit pain responses. In order for this mechanism to work, however, receptors must be present. Using high-

resolution fluorescent imaging techniques developed by Puthenveedu himself, the research team was able to visualize neuron receptors in real time. This allowed them to test different opioid substances and observe the reaction of the receptors as the interactions happened.

“Understanding how receptor localization changes in response to pain and medication is a different way to address the challenge of developing a non-addictive analgesic drug,” Puthenveedu said in a university press release. “If we can control what happens to the receptor after the drug activates it, we might be able to better control how the

See **MORPHINE**, A6

### SCITECH BRIEFS

#### Researchers develop invisible objects

Previous attempts at making invisible objects have depended on metamaterials — artificial materials engineered to have properties that are not naturally occurring. However, physicists from the Ioffe Institute and Australian National University have recently created cylindrical objects that are not only invisible in the microwave range, but do not require additional metamaterial coatings.

The scientists made this discovery by studying the way light scatters in a glass cylinder filled with water. They found that at high refractive indexes, light scatters via two mechanisms — resonant and non-resonant scattering — and that at certain frequencies, the light scattered through these two mechanisms cancels itself out, making the object appear invisible. The results from this study have been published in *Scientific Reports*.

Source: Science Daily



Courtesy of Martin Pettitt via flickr creative commons



Courtesy of Department of Defense via Wikimedia Commons

#### Tests can predict risk of breast cancer

Researchers at the University of Copenhagen, in collaboration with the Danish Cancer Society, have created a metabolic blood profile test that can predict whether an individual will develop breast cancer in the next two to five years with an 80 percent sensitivity.

Blood samples taken from participants 20 years ago and stored in liquid nitrogen were compared with more recent blood samples from the same group of people, some of whom had developed breast cancer two to seven years since giving the first sample. Instead of studying a single biomarker, which is a common procedure in medical science, the researchers analyzed all of the compounds in the blood samples and found a pattern that predicts the cancer. The test will have to be better validated before it can be used commercially.

Source: Science Daily

#### SpaceX rocket has rough landing

Last Tuesday, an unmanned SpaceX rocket took off from Cape Canaveral, Florida to send a cargo ship to the International Space Station. The supply capsule was successfully sent on its way, but the booster rocket did not do as well. While booster rockets usually burn up in Earth's atmosphere or fall back into the ocean after a launch, SpaceX is attempting to develop boosters that can land safely and be used again, thus reducing the cost of space travel.

The booster from Tuesday's launch was supposed to land on a customized platform stationed 200 miles off the coast of Jacksonville, Florida, but, unfortunately, it landed too hard. According to a tweet from SpaceX founder Elon Musk, the rocket “landed fine, but excess lateral velocity caused it to tip over post landing.”

Source: CNN



Courtesy of Steve Jurvetson via flickr creative commons



Courtesy of Aktiv I Oslo.no via flickr creative commons

#### T-rex may have been hunted by others

Scientists recently analyzed a 75-million-year-old tyrannosaurus skull and jaw discovered in 1994 in Dinosaur Provincial Park in Alberta, Canada. The fossils belonged to a *Daspletosaurus*, the 30 foot long and two ton cousin of the better known *Tyrannosaurus rex*. Despite the estimated young age of the *Daspletosaurus* being studied, a number of scars were found on its skull and jaw. One puncture wound on the back of the skull was particularly noticeable. The scientists also found that some injuries appeared healed while others were not, indicating that some occurred while the dinosaur was alive. Based on the sizes and shapes of the scars, the researchers concluded that the injuries were inflicted by large, carnivorous dinosaurs, most likely other tyrannosaurs.

Source: Inside Science



#### Robot chef cooks gourmet meals

Engineers at Moley Robotics in the UK have developed a robotic chef that can cook high quality meals in just a matter of minutes. The system is called the Automated Kitchen and its consumer version, when developed, will come with a library of recipes that users can pick from and download. The robot's arms were made by Shadow Robot Company, the same company that develops products for NASA.

The robotic chef's talent is directly derived from professional chef Tim Anderson. Anderson was recorded while cooking with motion-capture gloves and his movements were translated into algorithms for the robotic chef. The makers of the robot believe that their robotic chef will not make real chefs obsolete — instead, it will give chefs a new way to get their recipes out to the public.

Source: Reuters



Courtesy of General Physics Laboratory via flickr creative commons

Compiled By  
**BROOKE KUEI**

See **PHAGE**, A6



## Phages occupy bacteria to cure infection

SHARON WU  
Staffwriter

From nasty colds to the chickenpox, we all have to face infections from viruses at some point in our lifetime. But did you know that there is a virus that infects organisms many times smaller than you? In the early 1900s, scientists started to notice a group of viruses that infect and lyse bacteria, the billions of microorganisms that are prevalent virtually everywhere on Earth. Coined as bacteriophages, or “phages” for short, these bacterial viruses were named for their “bacteria eating” ability.

Like all viruses, bacteriophages carry nucleic acid that is encased within a capsid, or coat, of protein. The capsid can be thought of as the head of a bacteriophage. The nucleic acid of the phage can either be most commonly in the form of deoxyribonucleic acid (DNA), or ribonucleic acid (RNA). In either case, the nucleic acid serves as the genetic material of the bacteriophage. Genetic material is important as it gives the essential instructions necessary for the phages to be able to function and propagate.

Bacteriophages come in three different structural forms. A bacteriophage can have an icosahedral — twenty-sided — head with a tail. During infection, the tail serves as a hollow tube that serves as a passageway for nucleic acid during infection. Another type of bacteriophage has an icosahedral head, but no tail. Additionally, a bacteriophage can come in a filamentous, rod-like, form.

So how did scientists come across these creatures that cannot be seen even under the most powerful light microscope? According to a review in the *Journal of Chemical Technology and Biotechnology*, the first bacteriophage activity was found in river water, reported in a paper published in a French journal in 1896. In this paper, Ernest Hanbury Hankin, a British bacteriologist, noticed that the river water was effective in preventing the spread of cholera, a severe bacterial disease that had frequent outbreaks in India. However, it took 20 more years before the existence of bacteriophages was actually confirmed by American scientist Frederick Twort and French scientist Felix d'Herelle.

The discovery was followed by many studies that showed the potential of bacteriophages in curing bacterial infections. For instance, in 1919, d'Herelle prepared bacteriophages that were administered to patients at a hospital in Paris. The phage preparation was made to treat patients with bacterial dysentery. Patients were then reported to have recovered within 24 hours of treatment.

With their ability to eliminate symptoms of bacterial infection, you might be wondering how these bacteriophages work. In order to survive as a group of viruses, the bacteriophages must find a way to replicate themselves. This is accomplished through a series of reactions during the infection cycle.

During the first step of the infection process, the phage settles on a bacterial cell by attaching to specific recep-



# Scientists studying effects of morphine

MORPHINE, from A5

body responds to opioids.”

First, the team activated a neuron’s mu-opioid receptors using a compound called DAMGO, a biologically analogous opioid peptide which is specified to work on mu-opioid receptors. After being affected by DAMGO, only a fraction of the mu-opioid receptors returned to the surface, explaining in part the reason for neurons’ decreased sensitivity over time. If there are fewer receptors, the effect of the drug will be lessened.

After administering DAMGO, the team introduced the neuron to Substance P, mimicking a pain response. The pain brought the receptors back to the surface — effectively recycling them. However, when morphine was substituted for DAMGO, this effect was not observed. The team also applied a substance called fentanyl, an opioid often used as an anesthetic, which is around ninety times the potency of morphine and twenty times the potency of heroin. When fentanyl was administered, the results mimicked the DAMGO trial.

As research on pain and pain-relief continues, we become ever closer to understanding the mechanisms behind these sensations and reactions. In time, scientists may eliminate the heavily addictive properties of morphine and perhaps even develop completely non-addictive pain relievers.

## HOW THINGS WORK

# Phages play a role in infections

PHAGE, from A5

tors present on the surface. Fibers allow for the hollow tail to push through the bacterial envelope, which is partly digested by enzymes from the phage. Once the tail penetrates the surface, DNA from the head is now able to pass through the hollow tube and into the cell. After the injection, the remaining bacteriophage, still located on the outside of the bacterium, is void of genetic material.

From there, the next steps taken in the cycles differ, depending on whether the phage is lytic or lysogenic.

For lytic phages, only one path is followed after the injection of the phage DNA. As the injected phage DNA multiplies during the lytic cycle, phage capsids are also being produced within the host bacterium. The phage DNA, along with the host DNA, is then packaged into the capsids. In turn, new phages are created within the bacterium.

Afterwards, the bacterium undergoes lysis, or the disintegration of a cell through the

breakdown of the bacterial cell membrane. Consequently, this process causes the release of mature phages. While many of the newly made phages possess the DNA of the original phage, a couple of them contain DNA fragments of the previously occupied host bacterium. The newly released phages then go on to repeat the cycle, which involves the infection and destruction of more bacteria.

In contrast with lytic phages, lysogenic phages can either proceed to replicate within the lytic cycle, or they can enter a dormant state within the cell. During the dormant state, the phage DNA usually becomes incorporated into the host DNA. As a result, the bacterial cell may acquire new properties from the added genes of the phage, such as the ability to produce toxins. Prophage is the term for the phage in this integrated state.

Despite their seeming inactivity, lysogenic phages have been proven to be valuable in scientific studies, as they are able to manipulate some of the properties of a bacterial cell.

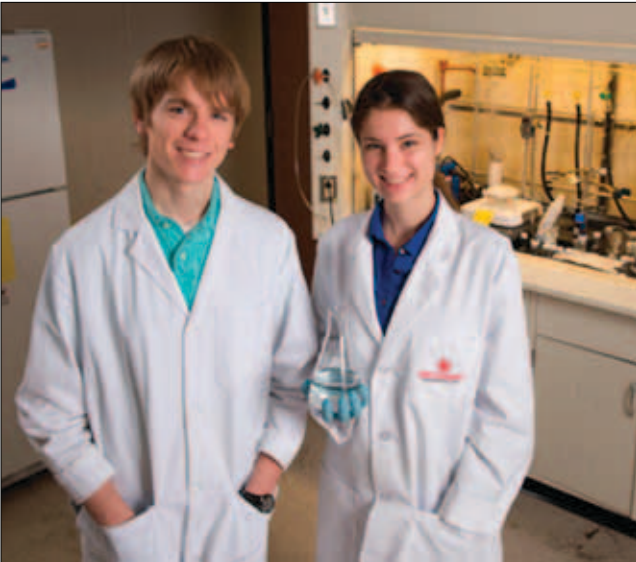
In addition, the lysogenic phages have the ability to enter the lytic cycle at any time. Such transition is usually triggered by the exposure of the bacterium to harsh environmental conditions, including exposure to ultraviolet rays or mutation-causing chemicals.

Even with the medical promise found within bacteriophages, phage therapy is still relatively uncommon. This is mainly due to the fact that critics attacked d’Herelle’s early studies and were unable to replicate them, which cast suspicion on the results. While phage therapy is still practiced in Eastern Europe and the former Soviet Union, this practice has long ceased in the Western world. The controversy about d’Herelle’s work, combined with the rise of antibiotics, eventually led to a rejection of phage therapy.

Often prescribed by doctors to treat bacterial infections, antibiotics have become a household staple in the medical cabinet since the discovery of penicillin in 1928. However, the overuse of antibiotics has led to their decreasing efficacy in treating bacterial infections, as the elimination of a large population of bacteria has led to the emergence of stronger and more resistant bacteria.

As antibiotic resistance becomes a growing threat to public health, there has been a renewed interest in phage therapy. Phages are highly specific and are easy to modify when they attack bacterial targets. The extensive use of phage therapy in Eastern Europe and the former Soviet Union has been proven safe to patients as well as commercially viable. With increasing knowledge of bacteriophages’ abilities, phage therapy may be an answer to the woes of many Western scientists, doctors and patients in the fight against bacterial diseases.

# Two students awarded Goldwater scholarship



Courtesy of Joshua Kubiak  
Joshua Kubiak (left) and Jillian Jaycox (right) received Goldwater Scholarships to study in their respective fields.

AWARD, from A5

publishes about science, society, and law.

“I am excited to win the Goldwater Scholarship,” Jaycox said. “This award is a reflection of the mentorship and opportunities provided to me by both Carnegie Mellon and [the] University of Pittsburgh, and it is a promising stepping-stone toward my goal of becoming a physician-scientist.”

She hopes to obtain an M.D./Ph.D. in immunology and to “conduct research on autoimmune disease or infectious disease and practice medicine in an academic setting.”

“With this career, I ultimately hope to improve the biomedical understanding of immunological diseases in order to improve the lives of patients suffering from these disorders,” Jaycox said.

Kubiak and Jaycox join the 260 college sophomores and juniors chosen for the scholarship out of more than 1,200 nominations for 2015. Kubiak and Jaycox will also join a group of 20 other Carnegie Mellon students who have previously been awarded this scholarship.

professor at the University of Pittsburgh who studies the immune response to bloodstream fungal infections. Jaycox also designs DNA nanoparticles made of backbone-branched DNA with Subha R. Das, an associate professor of chemistry at Carnegie Mellon.

Jaycox runs with the university’s cross-country and track teams and works as co-president of *The Triple Helix*, a student journal which

“[This award] is a promising stepping stone toward my goal of becoming a physician-scientist.”

– Jillian Jaycox, junior biological sciences major

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PUGWASH

# Pugwash conference discusses global sustainability topics



JOSEPH ROLLINSON  
*Special to the Tartan*

Last weekend, three members of Pugwash drove to Purdue University to attend the Purdue Student Pugwash Conference. The Purdue Student Pugwash Conference is a two-day-long event with talks focused around a theme. This year’s theme was global sustainability.

The conference began with a talk on the Ebola virus by Robert Stahelin, an adjunct associate professor of chemistry and biochemistry at the University of Notre Dame. Stahelin’s research focuses on a viral matrix protein found in

the Ebola virus called VP40. VP40 plays a central role in the assembly and budding of the virus. Unlike Ebola, VP40 is not dangerous to humans, meaning that it can be studied without the major safety precautions needed for Ebola, which are expensive and rare. Stahelin’s lab has found new methods of slowing down the growth rate of VP40 in cells, which hopefully can be used in new treatments for Ebola.

The second talk was by Klein Ilegeji, an associate professor of agricultural and biological engineering at Purdue University. Ilegeji’s talk focused on achieving a commercial bioenergy industry from biomass. Bioenergy is energy acquired from materials derived from biomass such as wood, corn, and agricultural byproducts. Increasing bio-

energy, Ilegeji argued, would improve America’s energy independence and stimulate the domestic economy. The variety in density, shape, size, and water content of biomass leads to substantial bottlenecks in transportation and use.

Ilegeji argued that one possible solution to this problem would be to standardize biomass as pellets with high density and low-water content that are aerobically stable. These pellets could be transported using the supply chain currently used for feedstock. Due to their low water content, they would also work well in bioenergy plants without large amounts of pre-processing. At the end of his talk, Ilegeji was asked about the efficiency and environmental impact of bioenergy from crops such as corn. He argued

that the energy produced by bioenergy was more than the energy used to grow the biomass. However, the environmental impact of bioenergy is still a contentious issue.

The second day began with a talk by Maureen McCann, the director of the Energy Center at Purdue. Her talk focused on attempts to increase the amount of fuel collected per acre of land. She began by describing better varieties of corn for biomass accumulation, which can double the biomass yield and use only a tenth of the fertilizer. She next discussed how conventional biomass-to-ethanol processes convert only one third of the carbon into fuel. One particularly underused material is lignin, which is currently burned off. Lignin makes up 15 to 25 percent of biomass,

but contains 40 percent of the energy. Recent research has led to a new process that can turn lignin into a hydrocarbon with a greater-than-100 octane rating at a 93 percent yield. This, too, could increase the amount of fuel collected per acre of land.

After this, there was a talk led by an anti-GMO activist, followed by the final talk by Sharlissa Moore, the president of Student Pugwash USA. She discussed the history of Pugwash and the growing need for ethics education at the societal and institutional level. Children are frequently taught ethics at the personal level. For example, they are told not to lie and not to steal. However, as our society grows in size and scale, large-scale questions such as implications of human enhancement tech-

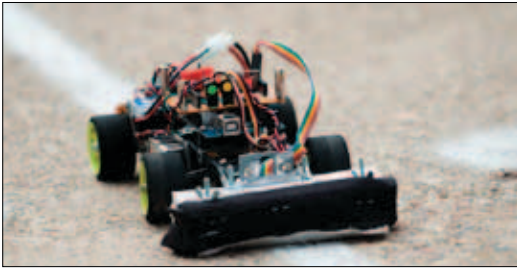
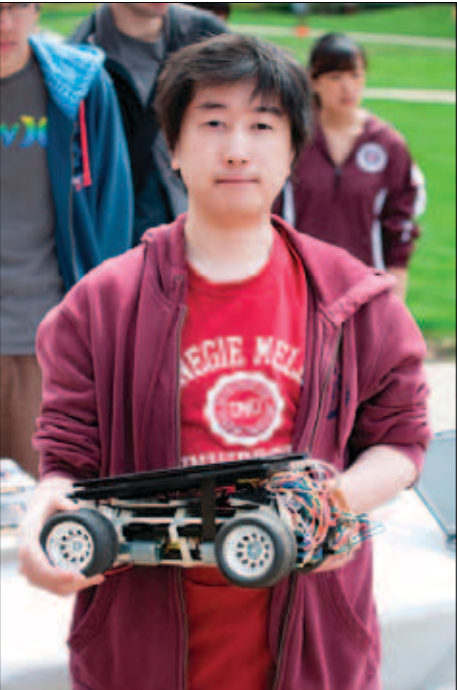
nology and who gets to engineer tomorrow’s climate become just as important. Moore argued that these issues of “macro” ethics must be part of our education in order to have a sustainable society.

The visiting members of Pugwash had no idea what to expect from this conference. As the only students from an outside university, they were warmly welcomed by others. Nearly all speakers were well-informed and provided an interesting take on sustainability. Pugwash will certainly be back next year for another great conference.

*Student Pugwash is a non-advocacy, educational organization that discusses the implications of science. This article is a summary of a conference Pugwash attended last week.*

FEATURE PHOTO

# Annual CMU Mobot Races showcase student projects



Team Qbot (bottom middle) won first place in the undergraduate category in the 21st Annual Carnegie Mellon Mobot Races last Friday. Qbot’s mobot reached gate 10 in 4:34.1. From left to right, the team was composed of Hanqi Sun, a freshman mathematical sciences major, Edward Ahn, a freshman electrical and computer engineering and robotics double major and Spencer Barton, a senior electrical and computer engineering major.

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# Forum

## Tragedy reminds us to embrace our roots and go home

**LAURA SCHERR**  
*Publisher*

*Stabbing reported at Franklin Regional High School near Pittsburgh, Pa:* I was on the treadmill when I got the CNN alert a year ago from last Thursday. I nearly fell off the machine.

The last thing that I was expecting on that beautiful spring morning was to wake up to the chance that my brother and sister, my cousins, my friends, and my teachers had been put into danger. It was the day before Carnival, and a school stabbing was not on the schedule, or even within the realm of possibility in my small, socio-economically stable high school. Absurdly, I wondered if I would have to skip Carnival.

As I struggled to understand what was happening, to get in contact with everyone I know and care about, to go about my last day of classes, to keep up with Twitter and breaking

news, I felt like more of a stranger than I ever have on Carnegie Mellon's campus.

Sitting in class, I couldn't believe that there was any place for normalcy in that day. How could all of these people sit around discussing the rhetoric of a narrative structure while I waited to hear how many people had been seriously injured in my hometown?

My classmates didn't even know the stabbing had happened, let alone that it had happened in the hallway where my sister had her first class. I had my laptop open, refreshing the CNN article with live video feed, aware that the grad student sitting next to me was watching out of boredom. It felt like I was in a slow-moving, high-tension episode of a soap opera.

Few people from my high school came to Carnegie Mellon with me, and no graduating class since I started has sent more than two or three

students here. I was excited to seek out my place on a campus where nobody knew me, where I could reinvent myself, where I could blend in with the crowd.

But walking to class that day, I felt totally alone and desperate to be with someone, anyone, from Franklin Regional. I texted my friends from high school who were all together at Penn State, watching the news together in pockets across campus, with anyone they could find from Franklin.

That was what I needed. I needed somebody to recognize what I was going through — because nobody knew, just from looking at me, that my hometown was in chaos and that my friends and family had witnessed a horrific act of violence. I was in a bubble, and only a few people knew why or how to break through it.

When I did finally run into one of those random people who came from Murrysville, it was as if I was meeting the first person who spoke the same

language that I did that day. Without any introduction or fanfare, we exchanged information: who we knew was okay, who we had heard wasn't, and who had done this terrible thing.

Standing outside Warner Hall, we hugged, then parted ways. It was a three-minute conversation, but it was my lifeline: It gave me that link, that connection to Murrysville and my school, that I needed.

Since that horrible day, a lot has changed. Charges have been filed, the last victim was released from the hospital, a class has graduated, and another year has started fresh. There are still obvious scars in the community, but Murrysville has picked up and kept going, everyone coming together and supporting each other in the process.

I've changed, too. Not just in the obvious, "hug your loved ones more often" way, but in the way that I root myself. I love Carnegie Mellon, and I love my community here. But on that

day, I realized just how important it is to maintain a sense of belonging to your home, whether that be a classroom, a sports field, a store, a bagel deli, or your family.

Appreciating your roots isn't just about loving your hometown — because many of us don't. Rather, it's about having a place to call your hometown. A place to look back to, and to fall back into, and to ground yourself in. It's healthy to move forward in life, but there will be no real growth if you don't have a stable foundation from which to grow.

It took a tragedy to draw me back into a sense of belonging in my hometown, my high school, and, on some level, my family, and that terrifies me. When I went home for my brother's graduation, I stood proudly with my family as we sung the tuneless Alma Mater loudly and off-key. I knew then as I know now that I lucked out with Murrysville, with Franklin Regional, and above all, with my family.

FROM THE EDITORIAL BOARD

## Temporary technical failures won't prevent SpaceX's ascent into private space industry

On Tuesday, Apr. 14, Elon Musk's transport service company, SpaceX, launched a rocket for the second time this year. Onlookers had high hopes, but were disappointed when the rocket crashed and exploded upon landing.

Even though the mission had been a resounding success for SpaceX itself — which celebrated hitting the landing site at all — questions still flew over whether SpaceX was actually a new face of the space industry or just a high-tech pretender.

In 2013, critics circulated a video of a car made by Tesla — another company owned by Musk — catching fire after crashing into a pole on a highway.

The accident was notable in its isolation; no other Tesla engine had caught fire before, while crashes cause fires in dozens of other brands on a weekly basis. The survivors of the accident walked away unscathed, but Tesla's reputation didn't.

For critics, one failure was enough to pull Tesla off its pedestal, leading to a 6 percent drop in the price of Tesla stock over the course of several hours.

It seems that everything that goes wrong for Musk is instantly elevated to a disaster of epic proportions. Musk is not given the privilege of trial and error. This tendency to try and smack down technological progress at any hint of imperfection is a dangerous symptom of American anti-intellectualism and resistance to change.

The basis of resistance to technology relies on comparing progress to perfection rather than old technology. Cars catch fire when they crash into poles quite often, but the public jumped on Tesla after a single freak accident. In crashes, Teslas have been proven safer and less likely to combust than other car brands. Following the accident of 2013, Tesla soon add-

ed fireproof titanium underbodies to all of its cars free of charge.

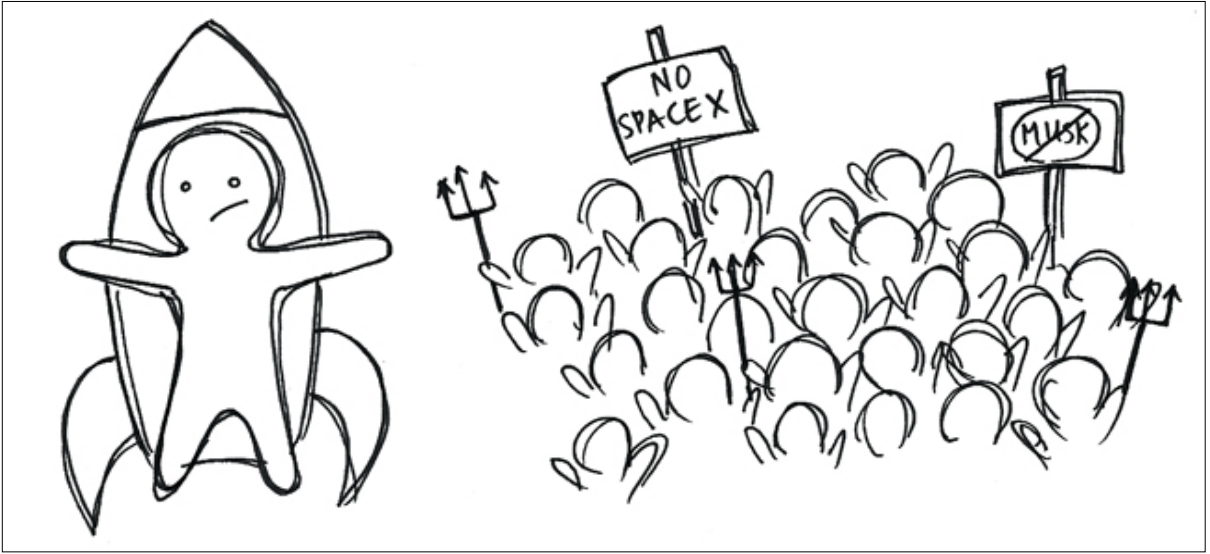
Tesla had the guts to admit its mistakes, and to be proactive in fixing them. However, people often think that new technology is unusable if it's not perfect. The status quo works "just fine" — except when it clearly doesn't. When we use separate standards for new and old technologies,

we keep those new technologies from gaining mainstream acceptance or improving the status quo. If we look at NASA, many rockets and other space vehicles fail in testing.

Unlike SpaceX, though, NASA and similar organizations are given both the benefit of the doubt and the resources to improve their designs. There's no reason to believe that two crashes mean that SpaceX will never build a totally functional rocket. If anything, a public launch without any prior failed tests would be cause for concern; a product that never fails in tests will never succeed in the market.

In order to create an environment conducive to progress, people have to give that progress a chance. SpaceX's most recent failure was public, but that does not diminish their accomplishments.

The rocket did not stick the landing here, but its ultimate success will rely on baby steps: its tests, failures, and the lessons SpaceX takes from each. Meeting temporary failure by calling Elon Musk delusional and innovation wasteful is a great way to ensure the future never comes.



Albina Kwak/Junior Artist

## JFC budgeting process must improve transparency

Each semester, every undergraduate and graduate student pays an activities fee of \$123 and \$99, respectively.

The Joint Funding Committee (JFC) allocates most of the money — over \$1.5 million — generated by the activities fee to all campus organizations recognized by student government.

This money includes 90 percent of the money generated by the undergraduate student activities fee and 30 percent of the money generated by the graduate student activities fee.

The JFC includes 10–15 students, and it is led by the Student Body Vice President for Finance. This year, organizations had to submit their proposed budget for the next fiscal year, which includes the fall 2015 and spring 2016 semesters, to the JFC by Jan. 23. According to the schedule on its website, JFC planned to release preliminary budgets for every organization on April 1.

In the following week, it was originally announced that organizations could submit appeals for the proposed budgets. However, the JFC

did not release preliminary budgets until April 7, almost a week after the proposed date.

Last week, student organization leaders met with their respective assigned JFC representatives as part of the appeals process, leading up to the Undergraduate Student Senate and Graduate Student Assembly joint budget ratification meeting this Thursday.

The JFC plays an important role on Carnegie Mellon's campus; its budget decisions shape the upcoming fiscal year for every JFC-recognized student organization. This year, the JFC process has frustrated many with its inefficiency and lack of transparency.

Because budgets came out a week later than planned, student leaders and members of the JFC had to rush through the appeals process the week of Carnival.

For the first time, organization leaders cannot view the rationale for the budgets of other organizations, cutting out a crucial aspect of what should be a transparent budgeting process.

Although this may be a result of

the JFC's new online budgeting system, Campus Labs Budgeting System, it has made this year's budgeting process more difficult for many. The new system itself is confusing, compounding other difficulties in the budgeting process. The Tartan wishes that the JFC accounted more for possible roadblocks when switching to a new system from the previous budget tracker.

Although the JFC and SBVPF work hard with the money raised from the student activities fee to make fair budgets for every organization, the reasoning behind their decisions can be murky for student organization leaders. A clearer enumeration of this year's changes to budget metrics could have been provided.

SBVPF-elect and junior mathematical sciences and economics double major Benjamin Zhang wrote in his election platform that he plans to increase student involvement and transparency in the budgeting process. The Tartan hopes that he follows up on these promises in the upcoming academic year to make the JFC process simpler and more streamlined for everyone involved.

## Students meet President Suresh halfway for second annual meeting

This Wednesday, President Subra Suresh will be holding an annual update to highlight the university's milestones and share thoughts on the university's future. Following the presentation, there will be a Q&A session open to faculty, staff, and students both in and outside of Pittsburgh.

In the past academic year, President Suresh led a listening tour tailored to students, parents, staff, faculty, and alumni that focused on setting priorities for the university. Suresh also announced the launch of a university-wide strategic planning process to map the direction of the university for the next five to 10 years. This planning process was a result of the input he received during his listening tours.

Although it's commendable that President Suresh has spearheaded important campus initiatives and updated the campus with positive announcements, there is still much to be done. As a leader of the campus community, President Suresh has an

obviously influential presence.

However, most of Suresh's rhetoric has typically consisted of buzzwords that, despite promoting the university's overall reputation, have little to do with the majority of students' current concerns. Carnegie Mellon's identity and global reputation may be critical to our future, but there are issues closer to home as well.

The Tartan is glad to see President Suresh facilitating another productive discussion and inviting student input. However, it is also important for students to bring thoughtful questions and concerns to the table.

President Suresh has already established himself as a community listener, so it's the campus community's responsibility to be vocal and help the university move forward.

President Suresh's annual update will be in McConomy Auditorium, this Wednesday at 4 p.m. The presentation will also be available live online.

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# Google could change minds by eliminating its gender bias



**UDAYA MALIK**  
*Online Editor*

While female CEOs are now kept in high regards by most of society, men in “traditional women’s roles,” such as nurses, remain a target of mockery and are often looked down

upon. Women are encouraged, much more than before, to try out careers in fields they genuinely like, instead of being pushed into stereotypical roles. Still, it is not close to enough. According to a research study conducted recently at University of Washington and University

of Maryland, Google image search results have a noticeable gender bias for certain jobs. It comes as a major disappointment that the Internet’s largest search giant conforms to gender bias. When the word “nurse” is image searched, the results consist entirely of women, primarily light-

skinned. White men dominate the results for the word “CEO,” while the word “doctor” shows only 10 percent diversity, the majority being male, according to *The Huffington Post*. In an age where the Internet dominates the lives of people, having the world’s largest and, by far, most respected search giant spew out gender bias is unsettling. Pictures don’t always form a person’s thoughts, but they do affect one’s subconscious, which is instrumental to the formation of opinions. The most damaging aspect about all this is that these search results are far from representing the correct statistics. The gender imbalance on Google is much more profound than it is in actuality, according to a study done by Emily Cohn. According to the image search, only 11 percent of the CEOs are women, while according to the data from the Bureau of Labor Statistics, 27 percent of CEOs are women. Same goes for job terms like “bartenders,” where the minority is again women, but in actuality 60 percent of bartenders are women, and telemarketers, where women are shown as the majority, despite there being a 50–50 split in reality. From here, things only get uglier.

Cynthia Matuszek, a co-author of the Cohn study, says that when you search “female construction worker,” you see “A number of the top hits depicting women as construction workers are models in skimpy little costumes with a hard hat posing suggestively on a jackhammer.” Google image search works by mining the web for content based on algorithms that are designed to show you the results it thinks you’d most want to see, according to *The Huffington Post*. Therefore, Google is capable of tweaking its algorithm to depict the actual distribution of gender among different jobs, but it chooses not to. Imagine if these images were skewed the other way round, for the sole purpose of eradicating social bias. Studies have shown that gender biases displayed in search have a tangible effect on how people perceive gender breakdowns in the real world. Google has the power to change people’s mindsets. It comes as a shock as to why Google would refrain from representing the actual data to its users. We surely will not continue to be as progressive as we think we are if search engines continue to spew out skewed results.

## Clinton not yet a proven progressive

**EMMETT ELDRED**  
*Junior Staffwriter*

Benjamin Franklin famously said that only three things were inevitable: death, taxes, and President Hillary Clinton. This Sunday, Clinton ended over 200 years of speculation when she officially announced her candidacy for President of the United States. To many politicians, the 2016 election is already a done deal. Hillary Clinton is unstoppable. She’s going to easily win the entire presidential election, let alone the Democratic nomination. Nearly a year before the first primary Caucus in Iowa, many ostensibly progressive organizations, media outlets, and groups have already thrown their support behind Hillary Clinton. They’re already calling on the rest of the Democratic party to fall in line, and they’re attacking true progressives like New York City Mayor Bill de Blasio, who dared suggest that he wanted to see Clinton’s “vision” before he blindly endorse her. Hillary Clinton has not yet proven herself as a progressive, and she needs to before she should have the unmitigated support of the Democratic party, much less its progressive wing. The problem with the rhetoric of inevitability is that it diminishes the urgency for a competitive Democratic primary that produces a truly progressive candidate. No candidate should get the party’s nomination simply because it’s her turn. She should earn the nomination by proving that she is the best candidate to represent and lead the party in the general election. The thing about primary elections is that nobody votes in them, except the people that really care about their party’s politics. Democratic primary voters are the most ideologically liberal voters, and they’ll vote for the most ideologically liberal candidate. With so many Democrats eager to skip the primary altogether and run Clinton unopposed, the danger is that Clinton can slip through the primaries without primary voters verifying that she is truly progressive enough to be the Democratic nominee. Unfortunately, the damage may already have been done. Anyone hoping for a competitive Democratic primary in 2016 is probably going to be sorely disappointed. Most of the truly progressive possibilities, like Senator Elizabeth Warren of Massachusetts and Senator Sherrod Brown of Ohio, have declined to run.

A few of the candidates still considering a run are Independent Vermont Senator Bernie Sanders, who is a self-identified Democratic Socialist, former Secretary of Labor Robert Reich, who is an outspoken activist on the issue of income inequality, and former Virginia Senator Jim Webb. The common ground shared by all of these candidates, other than being more progressive than Hillary Clinton, is that they are utterly unelectable. Even if any of these candidates do run, they will be hard pressed to impact the race whatsoever. To be fair, Clinton has struck a far more populist, progressive tone than

any Clinton bandwagon. We must demand of Hillary Clinton a truly progressive platform. This includes a hefty minimum wage increase, so that anyone who works full time can have the ability to provide for their family; tax increases on the wealthy and on corporations; an end to costly tax loopholes, to finance spending on infrastructure and education; heavy regulation of Wall Street; aggressive steps to end climate change; and foreign policy that ends the era of American colonialism through military intervention, and instead recognizes negotiation and diplomacy as the only tools to bring about sustainable peace.

**“The problem with the rhetoric of inevitability is that it diminishes the urgency for a competitive Democratic primary that produces a truly progressive candidate. No candidate should get the party’s nomination simply because it’s her turn.”**

in the past. She claims that she wants to be the “champion of everyday Americans.” She has harped on how the “deck is stacked in favor of those already at the top.” She has made income inequality a major theme of her campaign. She has voiced support for a Constitutional Amendment to reverse Citizens United, a recent Supreme Court decision that opened the floodgates for virtually unlimited corporate spending in elections. One of Clinton’s first major campaign hires was Gary Gensler, one of Wall Street’s most outspoken critics, a move that could be symbolic of an aggressive stance against the powerful corporate and financial interests that stand opposed to the interests of

We can’t let Hillary Clinton be the centrist candidate that she’s been in the past. In today’s political climate, centrism isn’t the same thing as bipartisanship. The more Democrats try to meet Republicans in the middle, the more the GOP will move to the right. This is why people think the Affordable Care Act, an idea first championed by the conservative Heritage Foundation, is socialism. Hillary Clinton must establish herself as a populist, progressive candidate, whose policies stand up for the poor and middle class and demand more of the wealthy and of corporations. That is a winning strategy that will help move the country forward.

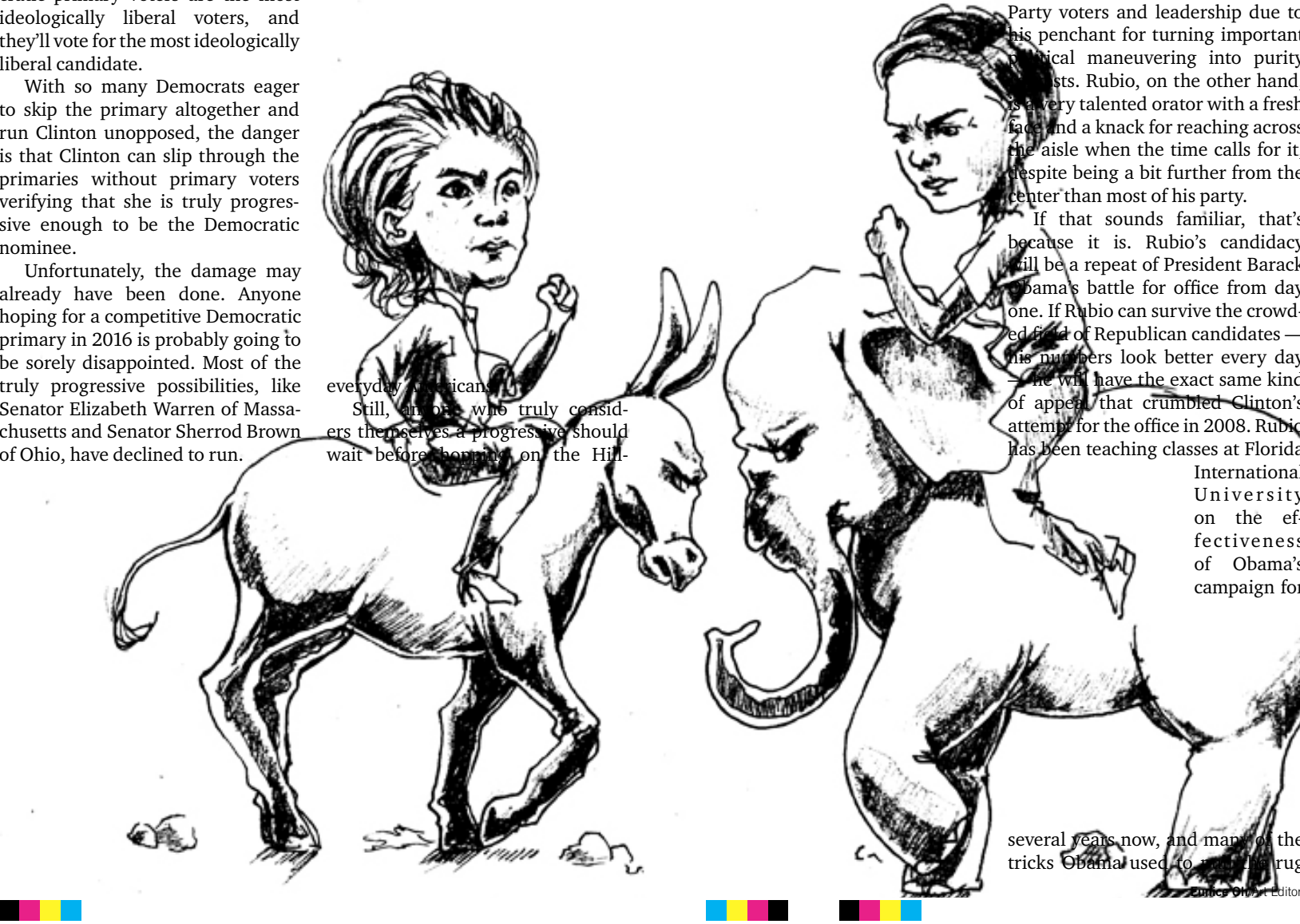
## Rubio represents threat to future of Democrats



**ZEKE ROSENBERG**

Junior United States Senator Marco Rubio (R–FL) announced his candidacy for president last Monday. Rubio’s announcement should be troubling to the left side of the political spectrum. Whether it’s in 2016 or beyond, Rubio represents the Republican Party’s major advantage over Democrats: young and recognizable faces. While former Secretary of State Hillary Clinton seems to be the only candidate from the Democrats with credible momentum, the Republicans have a bench of five legitimate presidential candidates and a whole host of faces who we may see in 2024 and beyond already making names for themselves. This development not only puts the Democrats in a bad position for the near future, but it also undercuts the liberal message that Republican politics are relics of a bygone era. It is hard to sell the party of new ideas with old faces. Rubio, along with Senators Rand Paul (R–KY) and Ted Cruz (R–TX), is a member of a sizable bloc of the Republican presidential field comprised of candidates at least fifteen years younger than Clinton. However, only Rubio poses a very immediate threat to Clinton’s candidacy. Paul has alienated some of his father’s libertarian base by shifting to the center on several issues, including foreign policy, and he often makes a fool of himself in public appearances where he can be bumbling or overly aggressive. Cruz is a shrewd politician, but ultimately lacks the support of both Republican Party voters and leadership due to his penchant for turning important political maneuvering into purity contests. Rubio, on the other hand, is a very talented orator with a fresh face and a knack for reaching across the aisle when the time calls for it, despite being a bit further from the center than most of his party. If that sounds familiar, that’s because it is. Rubio’s candidacy will be a repeat of President Barack Obama’s battle for office from day one. If Rubio can survive the crowded field of Republican candidates — his numbers look better every day — he will have the exact same kind of appeal that crumbled Clinton’s attempt for the office in 2008. Rubio has been teaching classes at Florida International University on the effectiveness of Obama’s campaign for

out from under Hillary will be in play next November. Rubio is not particularly likely to win the Republican nomination, and he’s no lock to beat Clinton in a general election either, but he poses the most compelling threat in a minefield for the presumptive favorite. Not only is he an immediate problem for the Democrats, he represents a demographic change within politics. Names like Rubio, Cruz, Paul, Representative Paul Ryan (R–WI), and others are already visible on the national stage. Rubio may not be keeping his Senate seat after the election, but plenty of people are right there to take his place. The Democrats have some serious rebuilding to do. Promising young Democrats have either been voted out of the picture or have drifted more toward state rather than national politics. Things like the Emerging Democratic Majority — a silly proposition relying on cherry-picked elections data and completely ignoring the effects individual candidates have on independent voters — won’t save the party if new players don’t emerge from the woodwork fast. Hand wringing about the demise of the Republican Party stems from two faulty assumptions. The first is that Republican demographics are dying out, both literally and figuratively, and cannot sustain the numbers to win seats. This is false on two levels. Republican voters are significantly more likely to vote in non-presidential elections, and split-ticket voting has resulted in many people voting for Democratic executives and Republican legislation. Holding the House and Senate puts the Republicans in a very advantageous position in terms of passing laws. The second is that the Republican message is outdated and unable to change. Republican politicians who are in office now are going to be around for a long time, and many of them have progressive versions of the future that stick to Republican ideals. Politicians like Ryan and Rubio have explicit policy platforms for alleviating economic inequality without extensive government interference. Valence voters and other voters who care more about candidates than parties are an important voter bloc that is often won through familiarity. Ceding that ground will always be dangerous. The Democrats are okay but vulnerable for 2016. Beyond there, the party better hope for a name like Rubio. Zeke Rosenberg (erosenbe@) is the sports editor for *The Tartan*.





# Strong field of contenders portends exciting NBA playoffs

**ZEKE ROSENBERG**  
*Sports Editor*

The NBA playoffs this year feature one of the deepest and most balanced fields in recent memory. Despite a very weak Eastern Conference, there are six teams that could reasonably win the title. Even teams without title aspirations can make names for themselves with first round victories.

In the East, it comes down to the Cleveland Cavaliers and Atlanta Hawks. The other six teams in the conference are all brutally flawed, thrust into the playoffs because the spots are reserved rather than earned. Many people think the Hawks lack the star power to compete with the Cavs in the playoffs, but the Hawks have nine players who can do serious damage and, as we saw with the Spurs last year, depth is incredibly important as tired legs falter toward the later rounds of the playoffs. The Chicago Bulls are getting star guard Derrick Rose back and, with their full cast together, could do some damage, but the Cavs have been dominant for a long time and will likely run directly over the Bulls in the second round, should they get that far.

There are some fun teams in the Eastern playoffs, such as the Boston Celtics and the Milwaukee Bucks, but those teams are fun to watch because they string together wins despite glaringly obvious holes, not because they're well-oiled machines waiting to do serious damage.

If the Toronto Raptors or Washington Wizards can find their early season form again, it's possible that one of those teams could turn some heads in the second round against the Hawks, but it is unlikely that the winner of the round one series between the two teams will be very competitive.

The Cavaliers are heavy favorites to win the East, but the Hawks ought not be counted out. Depth matters, and center Al Horford is a star despite what anyone says. He can take over a game and start blowing up the paint, as he has in the past when Brooklyn Nets guard Joe Johnson was on the Hawks and they made the second round a couple times.

Speaking of the Nets, they're in the playoffs for some reason. Maybe it will be fun to watch them get eaten alive by the Hawks, but they're a symbol of conference imbalance rather than an actual factor in the playoffs. The NBA should look into a system where a team this bad is replaced by a team as good as the Oklahoma City Thunder, which narrowly missed the playoffs in the West, but that will not happen this year.

Ultimately, the Hawks are the best coached team in the playoffs. With all due respect to Cavaliers forward and four-time MVP LeBron James, depth often goes further than star power. James can absolutely win a series by himself, even against a good team, but Vegas calling the Cavaliers the favorite seems to be undercutting the top seed.

In the West, four teams — the Golden State Warriors, the Houston Rockets, the San Antonio Spurs, and the Los Angeles Clippers — are all realistic bets to make the finals. The Warriors have a first round matchup against the New Orleans Pelicans, a team led by forward Anthony Davis and a competent if not spectacular supporting cast. The Warriors, however, are a well-oiled machine and should dispatch the Pelicans with little resistance.

The Rockets draw the Mavericks, who started the year off as the league's best offense and then collapsed upon trading for guard Rajon

Rondo. The Texas rivalries always make for great intensity, but it's possible this series becomes a very boring parade to the foul line as players hack Rockets center Dwight Howard and Rondo and Rockets guard Harden draws fouls with reckless abandon.

The Clippers and Spurs playing is the pinnacle of how evil the NBA's playoff structure is. Both of these teams should have earned the right to feast

on weak East competition in the first round. Even if the conferences are important for some reason, a normal seeding in the West would have pitted the Clippers against the Portland Trailblazers and the Spurs against the Memphis Grizzlies, but the NBA gives undue rewards to divisional winners, which caused these two title contenders to meet in what should be an epic first round clash featuring lots of

star power in Clippers forward Blake Griffin, guard Chris Paul, Spurs forward Kawhi Leonard, and others. Two of the NBA's most storied coaches, the Clippers' Doc Rivers and the Spurs' Gregg Popovic will go at it in what could easily have been the conference finals.

Led by guard Steph Curry, the Warriors have been the best NBA defense in years, and their offense is not far behind.

It seems silly to bet against a team that has been so good in every respect for the whole season, and the Warriors should do serious damage in the playoffs.

With a deep field, the NBA playoffs should be as exciting this year as any. The small sample of the playoffs always creates some fun surprises and turns expectations on their head. This year looks like it will bring more of the same.



Maegha Singh/Staff Artist

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# Sports

## Milliseconds decide Buggy as SDC, CIA emerge victorious



**Left:** Senior mechanical engineering student Glenn Philen chases the buggy. **Top Right:** Senior business administration and information systems double major Jordan Kunz barely reaches the buggy to prevent a disqualification for SDC A. **Bottom Right:** Buggies spent most of the race neck and neck in one of the closest finishes in recent memory.

**NISHANT REINWAL**  
*Staffwriter*

The 96th Annual Sweepstakes competition had its first full two days of racing since 2010, and the competition more commonly known as Buggy had some of its best racing in over two decades with close finishes in the men's races and surprises in the women's ensuring that the large audience at the event did not go home disappointed.

SDC had comfortably won both the Men's and Women's races each of the last three years, but would not be nearly as dominant this time as CIA A and Fringe A comfortably beat their A team in the women's race while they only won by less than a second against both SigEp A and CIA A in the men's edition.

A key reason why SDC A maintained their position at the top of the men's standings was the performance of Jordan Kunz, their pusher on hill 5. With the buggy barely

a meter from the finish line, he managed to grab the bar a fraction of a second before it crossed the line and ensured that his team was not disqualified. Of course, this was after he ran fast enough to set a time of 2:12.358 to beat SigEp A by just 348 milliseconds. With CIA A also finishing with a time of 2:12.955, it was the first time in over two decades that the top three men's teams finished this close. PiKa A could have given any of these teams a run, but they were disqualified in the preliminary races for missing the bar.

This was also the first time in thirty years that CIA won a race in any gender category, with the 1985 women's race their most recent turn atop the standings. They have made large strides over the last year and managed, along with SDC A, to place in the top three in the men's and women's categories.

Fourth place in the men's category went to Fringe A, who performed quite well in

setting a time of 2:14:172 and finishing within two seconds of the top 3. Spirit A, SDC B, Apex A, SAE A and SDC C rounded off the the leaderboard for the men's categories as nine teams managed to finish the race.

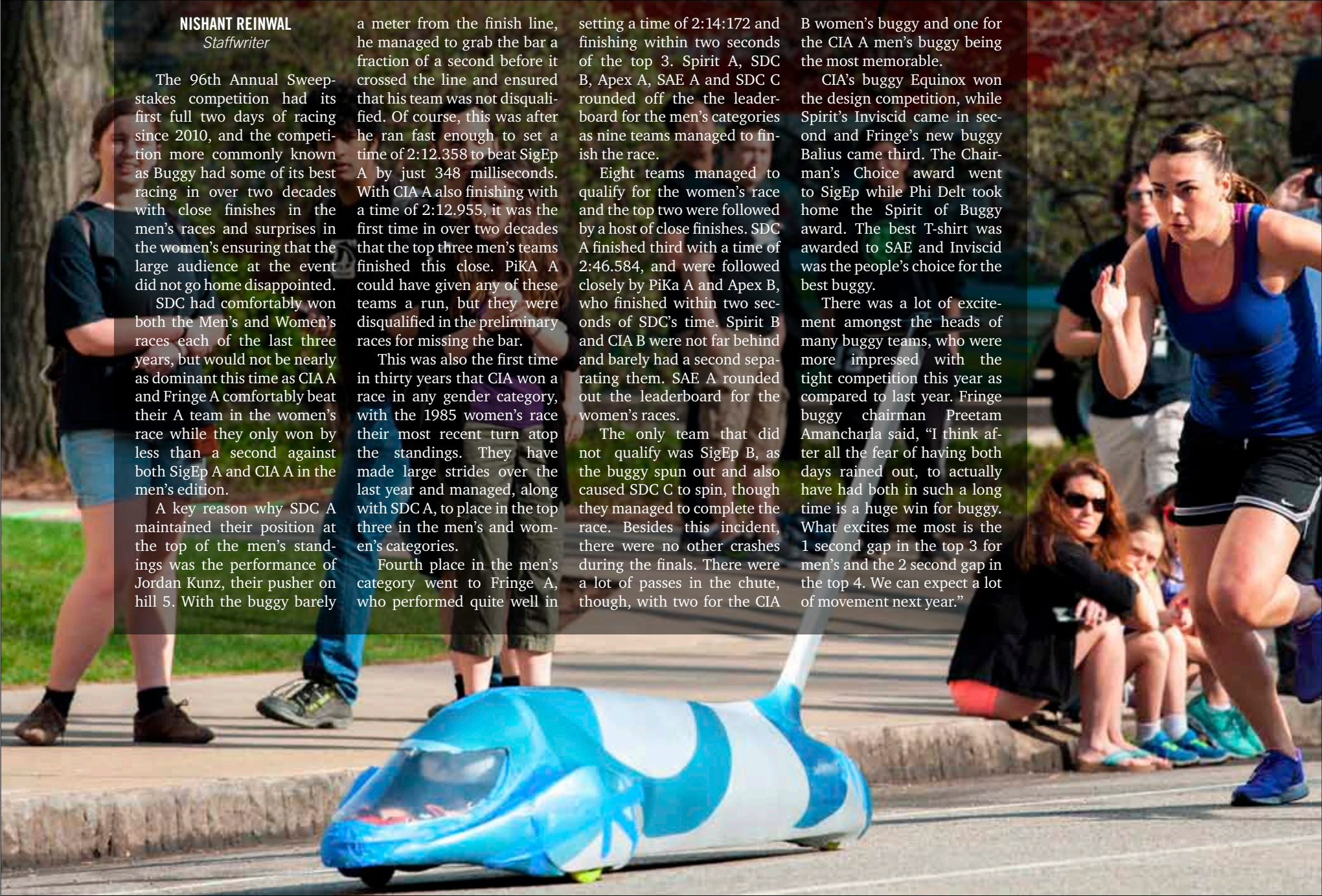
Eight teams managed to qualify for the women's race and the top two were followed by a host of close finishes. SDC A finished third with a time of 2:46.584, and were followed closely by PiKa A and Apex B, who finished within two seconds of SDC's time. Spirit B and CIA B were not far behind and barely had a second separating them. SAE A rounded out the leaderboard for the women's races.

The only team that did not qualify was SigEp B, as the buggy spun out and also caused SDC C to spin, though they managed to complete the race. Besides this incident, there were no other crashes during the finals. There were a lot of passes in the chute, though, with two for the CIA

B women's buggy and one for the CIA A men's buggy being the most memorable.

CIA's buggy Equinox won the design competition, while Spirit's Inviscid came in second and Fringe's new buggy Balius came third. The Chairman's Choice award went to SigEp while Phi Delt took home the Spirit of Buggy award. The best T-shirt was awarded to SAE and Inviscid was the people's choice for the best buggy.

There was a lot of excitement amongst the heads of many buggy teams, who were more impressed with the tight competition this year as compared to last year. Fringe buggy chairman Preetam Amancharla said, "I think after all the fear of having both days rained out, to actually have had both in such a long time is a huge win for buggy. What excites me most is the 1 second gap in the top 3 for men's and the 2 second gap in the top 4. We can expect a lot of movement next year."



Senior professional writing major Chandler Caufield sprints after a buggy. CIA A won in the women's division.

Matt Nielsen/Staff Photographer

### Men's Final Times

1. SDC A: 2:12.358
2. SigEp A: 2:12.706
3. CIA A: 2:12.955
4. Fringe A: 2:14.172
5. Spirit A: 2:16.598
6. SDC B: 2:19.460
7. Apex A: 2:20.403
8. SAE A: 2:24.039
9. SDC C: 2:25.950

### Women's Final Times

1. CIA A: 2:35.641
2. Fringe A: 2:39.992
3. SDC A: 2:46.584
4. PiKA A: 2:47.872
5. Apex B: 2:48.378
6. Spirit B: 2:53.209
7. CIA B: 2:54.525
8. SAE A: 3:11.269



# PILLBOX

The Tartan's art & culture magazine

## CARNIVAL REVIEW

04.20.15 VOLUME 109, ISSUE 24





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# DS celebrates anniversary

## Dancers' Symposium holds gala for 25 years of performance

This year, Dancers' Symposium (DS), a student-run organization that puts on a two-act dance show each semester, celebrated their 25th year at Carnegie Mellon. To honor the occasion, DS hosted an event at the Porch Friday night and invited back alumni to celebrate with current students.

Organizers realized the anniversary was on the horizon last summer when an alumnus contacted veteran DS director Joel Goodloe, a senior vocal performance major. Directors have pointed at alumni involvement as an area where they would like the organization to expand.

Michelle Cho, sophomore business major and DS director, added that they have recently started an alumni database to work toward this goal and celebrate the anniversary. They've also seen an increase in alumni interaction with social media sites. Last week when the dancers put on a flash mob, the video received a lot of alumni attention on Facebook, creating more interaction and conversation. Alumni still continue to come back to enjoy the show every semester. Cho believes this is because DS positively impacted so many alumni's college experiences that they're excited to maintain involvement.

Another director, David Buzzell, a sophomore double major in electrical and computer engineering and music and technology, added that it was DS alumni who convinced him to attend Carnegie Mellon in the first place. Positive alumni involvement is an irreplaceable asset for any organization, institution, or school, and DS sees this value.

The flash mob last week was part of another goal for Dancers' Symposium—increasing community interaction. Buzzell said that he wants to continue to expand the organization in new ways. This year they had 180 students audition, great progress for internal expansion. But externally they were looking to interact with campus in more ways than just performing once per semester. That's why they added their flash mob and held the celebration during Carnival. Dancers would like also to hold camps and classes in the area so that they can contribute what they've learned to the community.

After speaking to dancers and directors alike, it becomes clear that Dancers' Symposium is special to many members of our campus community. For dancers like sophomore materials science and engineering and biomedical engineering double major Sabrina Liu, it's an opportunity to continue to dance once coming to Carnegie Mellon, but it's also an opportunity for growth. After telling me "DS made me more sassy," with a gesture that was sassy indeed, Liu talked about how her participation allowed her to meet people who helped her come out of her shell.

Goodloe also emphasized that the social aspect of DS makes it special. His involvement stretches back to his first year at Carnegie Mellon, when he just auditioned and performed as a dancer. After that, he stayed on as a director and choreographer for three more years. He said that it gave him a family outside of his major.

Ryan Sickles, sophomore information systems major, who only participated in DS for one semester, talked about the program's value from a different perspective. He never danced prior to auditioning, but he said that it gave him such new respect for the dancers who do it every semester. They put in a significant amount of time before going to perform, which is difficult and deserves appreciation.

Cho, who had also never danced prior to joining DS, finds that one of the most special aspects of the organization is how accepting it is of everyone. "No matter where you come from, what background you may or may not have," they accept dancers of any skill level or genre, because what brings them all together is that everyone has passion for what they're doing.

Buzzell added that passion is really what keeps the organization moving forward. And at the party, it was clear that everyone there loved what they were doing. After everyone had finished enjoying the buffet, the crowd moved out onto the dance floor. Each dancer had their own style; some were in the center while some stuck toward the edge. A few were comfortable with aggressive hip-hop, and others just felt the beat. But everyone there seemed really happy to be dancing and to be with their friends. That's what made the night special.

**Sarah Gutekunst** | Operations Manager

## Advice for awkward people

About mistaking cosplayers for extraterrestrial life

**Dear Evan,**

**As I was getting ready to go out and start my three exquisite nights of Carnival debauchery, an alien knocked on my door. I knew she (it?) was an alien because she had this super futuristic and revealing outfit with spiked, '80s-style shoulder pads, horns, red and black hair, blue cat-like eyes, and a red sword shaped like half of a scissor.**

**I think she was looking for a way back to her home planet — I didn't recognize the name. But she was kind of hot, so I offered to take her with me to all the house parties over the weekend. She seemed confused, but seemed to think I was taking her where she wanted to go, so she agreed. So we got plastered, and stayed plastered all weekend. I can't remember any of it.**

**Now I woke up, and she's in bed next to me, and I think I slept with an alien, and I have no idea how to help her find her home planet, and I'm afraid she'll kill me with that weird sword she's been carrying everywhere. What do I do?**

**Fretfully,  
Lackadaisically  
Adventurous, Drenched  
Yonder Khakis In Liquor,  
Laughably Lacking  
Aptitude**

**Dear LADY KILL-LA,**

While the existence of extraterrestrial life forms, sentient or otherwise, is entirely likely, I highly doubt that a pretty one showed up on your doorstep, knew English, and imbibed substances that could very well be toxic — well, more toxic — to her alien body than to that of a human.

I posit a more realistic scenario: Your alien was, in fact, a woman cosplaying Ryuko Matoi, the protagonist from the semi-popular anime *Kill la Kill*. This year, Carnival weekend coincides with Tekkoshokon, the anime convention in Downtown; your alien is probably as stupid as you are, and got off the bus way before she should have. That scissor sword was probably very, very plastic.

So, if you two did sleep together, I would stop worrying about the repercussions of sleeping with an alien, and start worrying about whether or not you used a condom.

**Or just plan a drive-thru wedding,  
Evan Kahn**

Need advice?  
Send your queries to  
[advice@thetartan.org](mailto:advice@thetartan.org)





# Student film festival expands following

## CMU Community treated to an evening of student-made films at Shot for Shot festival

In only its third year, the Shot for Shot student film festival is still young enough that each year the program gets notably better. This year, the event nearly filled the Cohon University Center's McConomy Auditorium to capacity with students, faculty, family, and community, and delivered quality short films. Some relied on overplayed subject matter, but many were fresh and entertaining.

These films aren't your sixth-grade movie projects shot with a Best Buy-bought video camera. They're professional creations, made with professional equipment by near-professionals themselves. It's clear these student filmmakers take themselves, and their work, very seriously.

The film *Steel Town* won the Audience Award, determined by viewer-submitted paper ballots after the program, while *Milkman* took home the Grand Jury Prize and *Marcus Sunshine* snagged the Special Jury Prize.

### All Sight

*Directed by Talia Levin*

The festival opener asks, "What happens when our desire to live in the past overwhelms our motivation to live in the present?" A grieving widower spends his time in a virtual video game reality in which his wife is still alive, meanwhile neglecting his young daughter. Though it ends sweetly, it's a heartbreaking story that, despite the science fiction, isn't too far from reality.

### The Colourful Mind

*Directed by Bethany Barich*

Young painter Gracie Winters lives in a literally black-and-white world, chased by an oppressive government determined to quash individual expression. It's beautifully shot, the black-and-white lens creating a story in light and shadows. But the trope of expression-versus-government, complete with a central artist martyr, has been done before, and this film's arc is hard to distinguish from all the rest.

### Table For Two

*Directed by Connor Yoho*

Three masked men break into a Pittsburgh home. Meanwhile, a couple bickers in a nearby park, their relationship on the verge of breakup. The stories seem entirely disparate until they're not. What looks like a crime in progress isn't what we expect. While other films trudge through serious material, this one had the audience laughing throughout, in anticipation of the hilarious ending twist.

### Diamonds in the Rough

*Directed by Dominique Carino*

A little-known secret of downtown Pittsburgh, the Helfer family sets diamonds and toils over custom rings at their private jewelry shop. But life isn't all gemstones and sparkles — far from it, especially for heir apparent David Helfer, who struggles to follow his father Ira's

footsteps. *Diamonds* seems to stray too far down the family dynamics track, leaving us there at the end, without rounding out the narrative. Still, it's a poignant interview-based story, coarse and grounded like the city it's set in.

### Muted

*Directed by Lex Truss*

A frustrated young woman crumples up her written work, tossing the pages in a dingy dumpster in a rainy alley. Meanwhile, a ragged, bearded man digs up the pages, piecing them back together. When they meet, we see a touching exchange between two disparate characters. The effect is sweet, but the situation seems a bit contrived.

### Milkman

*Directed by Garrett Kennell*

*Milkman* is a standout for its sheer whimsicality, both in photography and plot development. The titular character is also a jolly caricature of himself, in a pristinely suburban neighborhood that is a caricature of itself. When a tragic accident occurs, the milkman springs into action, triggering a hysterical series of events. Spotted with fanciful humor, this film is probably the most perfectly executed.

### Pick Your Poison

*Directed by Ashley Czemienski-Hagan*

Constant miscommunication plagues star-crossed students Parker and Julie. The story is convoluted, with the poison metaphor somewhat lost on the audience — but on a scene-by-scene level, the writing is strong. Spiced with lines like, "How do you feel about sushi?" "Not as strongly as I feel about Indian," " the script adds clever punches of color.

### Rust Belt

*Directed by Daniel Kusbit*

Devoid of characters, dialogue, or plot, this three-minute film is primarily an aesthetic experience, pairing shots of rusting Pittsburgh bridges with free-flowing instrumental music. It experiments with geometry and movement, layering frames atop each other in dogged search of beauty, transforming these mundane, decaying structures into things of loveliness.

### Marcus Sunshine

*Directed by Marlee M. Schneider*

A reformed drug dealer turned stripper gets a compassionate portrait in this award-winning film. The treatment is gritty — it's probably the least polished of all the films — but respectful, humanizing our hero Marcus Sunshine in tender scenes with his twin sister. The filmmakers include a moment of graphic nudity, but it's an important decision to trade comfort for relevance, and thanks to beautiful filmmaking, the scene lends an odd majesty to Marcus's work. Perhaps the best film overall.

### Steel Town

*Directed by Nicolas Hurt*

In 1892 Homestead, a power struggle arises between underpaid steel mill workers and the robber-baron mill owners. Based on real events, this film condenses a historical epic into 20 minutes. Though impressive on many levels — detailed, period-appropriate costumes and a large cast — *Steel Town* takes itself a bit too seriously. It's difficult to present a classic trope — hardworking, struggling laborers against wealthy Gilded Age tyrants — as new, and *Steel Town* almost gets there.

**Rachel Cohen** | Contributing Editor



Abhinav Gautam | Photo Editor

After the screening of the films, the filmmakers took part in a panel discussion with each other and the audience.





# Audiences ponder the future of their friendships

Scotch'n'Soda's *Merrily We Roll Along* raises interesting questions despite weaknesses

This weekend, Carnegie Mellon Carnival attendees had the opportunity to see this year's Scotch'n'Soda Carnival slot musical *Merrily We Roll Along*. A work of pure genius from Stephen Sondheim and George Furth, *Merrily* explores the progression of a friendship among three people in reverse chronological order. There are many reasons *Merrily* is one of my favorite musicals, if not my favorite. Not only does it expertly examine friendship withstanding — or not withstanding — the test of time after college and throughout life, but it follows the creative partnership between composer and lyricist through music written by one of the masters himself.

I attended the 11 p.m. show on Saturday night. It was the last night of Carnival, right after the concert, when campus was full of revelers and those with just a little too much enthusiasm. The show definitely reflected that. Though giggling, heckling, and whooping abounded, the performers managed to stay in character as much as possible and pull off a relatively cohesive performance. The three friends — Frank, Charley, and Mary — have incredibly complicated relationships, and following them backward through time has the potential to be very confusing.

Frank, played by sophomore vocal performance major Angelo Ragghianti, is a very successful composer at the beginning of the musical, (which is technically the end, chronologically.) His relationship with Charley, played by junior vocal performance major Camilo Estrada, has been fractured by Frank's more commercial aspirations coming at the expense of his collaboration with his lyricist friend. First-year directing major Burke Louis portrayed the somewhat hapless and disillusioned Mary. At the beginning of the musical Mary yells at Frank, effectively disintegrating their friendship in much the same way that his friendship with Charley has disintegrated. Mary is a drunk, and teeters around the stage bemoaning the end of the trio's age old relationship.

The musical proceeds in a slightly happier direction after that. Audiences see Frank and Charley's falling out more closely, the dissolution of Frank's first marriage as a result of an affair, Frank and Charley's brief but unhappy success, Mary's rise as successful author, Frank and Charley's struggles to make it in the world of theater as college graduates, and lastly the evening the three of them met.

As a person who knows the musical well, I might have had an easier time than most following the storyline through the years. Both Ragghianti and Estrada's voices carried well and gracefully performed Sondheim's complicated and rapid musical numbers. Estrada executed "Franklin



Danielle Hu | Staff Photographer

First-year art major Melanie Anderson plays a television host in the scene where junior vocal performance major Camilo Estrada's Charley (right) embarrasses his friend Frank (center), played by sophomore vocal performance major Angelo Ragghianti, on live television.

Shepard, Inc." — in which Charlie blows up at Frank on national TV — practically perfectly.

The pit orchestra also performed the notoriously tricky repertoire with grace. Led by sophomore composition major Andrew Dewey, the various musicians sounded clean and together, even through some of the stickier spots onstage. Sophomore saxophone performance major Laurel Beatty even managed to make cool and on tempo typewriter sound effects for the song "Opening Doors."

Though the production had a variety of strengths, there were some areas that were a little less enjoyable. The Saturday night show probably had some discrepancies with the rest of the performances, but some of the problems were probably consistent over the course of the run. There was very little choreography during the production, which is partly the nature of the musical, but it also would have been nice to see some variety onstage. The ensemble often looked a little awkward and still during the transition numbers. Even having a couple dancers onstage in addition to the vocal chorus might have livened up some of the staging and given the audience much-needed visual stimulation.

The chemistry between the three leads was also a little off. As an audience member I didn't find their friendship that believable, and I found that it gave

the musical less integrity, because I didn't feel as emotionally invested in their relationship. Part of this issue was due to strange staging. Because of this, some of the more emotional lines of the musical came out a little cliché, rather than as heartwarming or tragic as they are supposed to sound.

At the end of the day, the extensive effort expended by those in the production was met with enthusiastic applause. Though the production might not have had the more seamless execution of past Carnival slot musicals, the thought-provoking nature of the musical left audiences considering their past and present friendships and the way time and circumstance has, and will, change them. This Carnival, *Merrily We Roll Along* still had the capacity to evoke these thoughts in those in attendance, and that is no small feat.

**Lula Beresford** | Pillbox Editor



# Matt and Kim get CMU dancing and grooving

American indie dance duo perform on the Mall for crowds of local Pittsburgh students

Carnegie Mellon students, bogged down for long semesters by the pressures of being Carnegie Mellon students, are known to leave their responsibilities in the classroom and party hard enough to turn any parent red for that one special extra long weekend every year: Spring Carnival. This year, nowhere was this more true than at Saturday night's Matt and Kim concert. People danced wildly, sang, and screamed their lungs hoarse. People got on each other's shoulders and crowd surfed all evening long. By the end, the concert felt like an intimate outdoor music festival.

The evening started at around 7:30 p.m. with opening act RJD2, a DJ from Philadelphia who works in what he likes to call "Psychedelic Soul." For his set, he combined a mixture of jazz, trip hop, and dance to gradually build the crowd's anticipation for the main act. Even though he started reasonably early with a thin crowd, he built his set perfectly to slowly warm everyone up, and was a good complement to what was about to come. By the time Matt and Kim stepped on stage, the crowd was well primed for what came next.

Matt Johnson and Kim Schifino are an archetype of atypicality if there ever was one. She plays the drums, and he sings and plays the keyboard.

And even with, or perhaps because of, this sparse arrangement, they make big, loud, stadium-sized music designed to get maximum hands in the air. And even though they write at the intersection of pop and dance, their music is unabashedly independent and veers away from anything you might find on the airwaves. More than anything else though, they have a reputation for playing high-powered, in-your-face shows. At Carnegie Mellon, Matt and Kim more than met the craziness levels that they are known for.

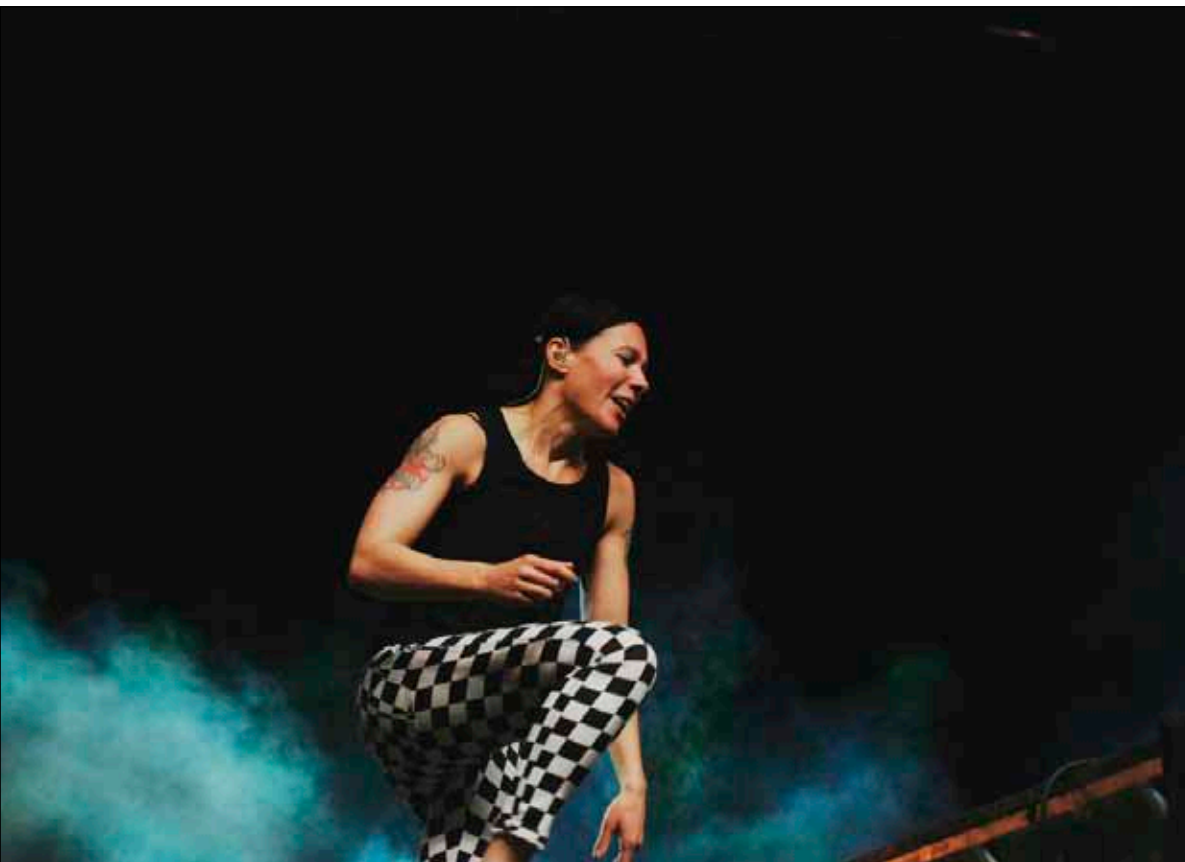
Matt introduced Kim as she walked on stage as "his partner in crime, and in sex." This introduction was just the first in a string of hilariously over-the-top antics that set the mood for the rest of the evening. The energy emanating from the two was stunning. One song in, Matt mentioned that Carnival was the duo's first outdoor concert of 2015, and that the heavenly weather was a sign that the evening was going to be a lot of fun. With that sentiment, they continued their set. Kim often jumped on top of her drum set to dance while she played. Matt sang his lungs out, moving all over the stage, dancing and playing the keyboard all the same.

The duo used an unbelievably wide assortment of tricks to keep everyone engaged. For one song, they

threw 400 unfilled balloons into the audience. Soon enough, the entire sky was patched with neon, and the already packed ground was full of people jumping to catch the balloons. For a ballad, Matt and Kim ordered the shorter people in the crowd to to climb on of the shoulders of others, and wave their hands in the air. For another song, Kim walked off the stage, onto the audience's hands to dance. All the while, a massive screen continuously filmed the audience.

One set and one encore later, most people looked like they had just emerged from a night club — exhausted, grimy, and sweaty, but utterly satiated. They left the Mall strewn with confetti and popped balloons, Matt and Kim's distinctive mark on the campus. This week, most students will go back to a regular work schedule. As a break before the final three weeks of the semester, the Matt and Kim concert was an excellent chance to experience the frivolous things in life that we so often miss at Carnegie Mellon.

**Abhishek Tayal** | Staffwriter



Michelle Wan | Personnel Manager



Michelle Wan | Personnel Manager

Married couple Kim Schifino (left) and Matt Johnson (right) have a charismatic and infectious energy on stage that can rouse a crowd, even if they are unfamiliar with Matt and Kim's music.





# Middleditch and Nanjiani bring the laughs

*Silicon Valley* stars present comedy show full of Carnegie Mellon-appropriate humor

"Who here likes robots?" *Silicon Valley* actors Thomas Middleditch and Kumail Nanjiani asked the crowd as they opened their comedy show on Midway Thursday night. To no one's surprise, the crowd's enthusiasm was overwhelming. Nanjiani even stated, "that was the most aggressive response I've ever heard to robots." Middleditch and Nanjiani's sets were very standard, but, like Nanjiani's mother said of his Amazon stand-up special, "none of the jokes were very dry."

The comedians took the standard route of self-deprecation, mostly pertaining to their nerdiness. Hitting home with an audience that celebrates its school's traditions of playing Quidditch and weird Carnival activities, Middleditch and Nanjiani fit in just fine among the Carnegie Mellon populace.

The two opened together, and within a few minutes, Nanjiani introduced Middleditch, who took the stage solo for about 30 laughter-filled minutes. The laughs weren't continuous, though, as Middleditch supplied the crowd with plenty of awkwardness — his vulgar jokes were, perhaps, a little extreme for some students. After trying to set up a single girl and guy in the crowd, Middleditch recounted his high school experience, his brief college years, and a near death experience.

"Thomas Steven Middleditch: I always felt like my name belonged in an old English novel. Like I'd be the boy asking 'Please sir, can you spare a bit more soup?' and he'd reply 'No, you rat bastard. Steven — stop touching your penis.'"

Middleditch sometimes invoked his father's British and Severus Snape-like mannerisms in his set. He proceeded to then tell the story of his near-death experience at the hands of the Pacific Ocean in Australia. When talking about death, Middleditch maintained a level of hilarity unparalleled by most comedians, making this one of the best Carnival comedy shows in years.

Middleditch and Nanjiani have been fellow comedians and friends for over ten years. After they both started their careers in Chicago, the pair were elated to find that they and many of their friends were cast on HBO's *Silicon Valley*, which airs every Sunday on HBO following the hit drama *Game of Thrones*.

Nanjiani is a fitting actor for the role of Dinesh on *Silicon Valley*. He is a Pakistani self-identified nerd from Karachi, who majored in computer science in college. He opened, as he usually does at his comedy shows, with his heritage, discussing his parents' idiosyncrasies and his own. A remarkable thing happened, though, as Nanjiani met another Kumail in the crowd who was also from Pakistan. Telling the crowd "You can all leave — Kumail and I are going to have a conversation," Nanjiani began to use this fellow Kumail's similarities as improvised material for his stand-up. His stage presence was very comfortable, and his big laughs were executed to perfection.



Danielle Hu | Junior Photographer



Danielle Hu | Junior Photographer

Two members of the cast of the HBO show *Silicon Valley*, Thomas Middleditch, left, and Kumail Nanjiani, above, performed in this year's Carnival comedy show.

It was at this time that then Nanjiani brought Middleditch back on stage, and they closed the show just as they had opened it: together. They further discussed their nerdiness, still prime material with Carnegie Mellon students late into the night, and they made a plug for their show. A competition sprung up within the crowd, proctored by Middleditch and Nanjiani. There were three blu-ray discs of *Silicon Valley*, and hundreds of students. After many students made remarks as to why they should get the discs, the two threw them into the crowd, with Nanjiani remarking "are you seeing these throws, man? I'm on a roll tonight!"

As the evening drew to a close, it was clear that both of them were on a roll. The student crowd left satisfied and in good spirits. The two are a pair worthy of recommendation for any standup viewers.

Brian Walsh | Staffwriter



# For 101st year, Carnival booths display scenes from a LIVING LIBRARY

## CMU organizations build wildly creative booths that take visitors on a journey through the ocean, the forest, and even to the very center of the earth

If you stepped onto Midway during this year's 101st Spring Carnival celebration, you may have noticed some familiar faces — no, not the faces of peers or fellow alumni, but the faces that appeared in some of your favorite books.

This year's Booth theme, Living Library, brought some of the most prominent books of the past and present to life on a Midway that seemed particularly polished. Despite a few hitches, like the failure of Delta Gamma and Alpha Chi Omega to open their *Jumanji* and *The Twelve Dancing Princesses* booths, respectively, it was delightful to see old classics like the *Berenstain Bears* and newer books like *Life of Pi* brought off the page and put onto the pavement of the Morewood Parking Lot.

Every year, the Carnival Committee examines the booths from top to bottom to determine which are the best of the best. This year, the committee awarded first place in the fraternity and sorority categories to Alpha Epsilon Pi for their *Jurassic Park* booth and Kappa Alpha Theta for their *Wonderful Wizard of Oz* booth, respectively. For blitz booths, the committee awarded first place to the Mellon College of Science for their *The Hunger Games* booth. For independent booths, the committee awarded the Taiwanese Students Association's *Life of Pi* booth with first place.

The Tartan similarly takes a look at every nook and cranny of the booths to determine which are the most successful, as well as which booths were most underrated. This year, we award our third annual Booth Awards in what were, although not necessarily category winners, some of the best booths this year.

### The Architecture Boothy for Best Design

Kappa Alpha Theta takes this boothy for their unique staircase leading up to the second story that replicated a tornado with a grayscale theme to match the aesthetics of the *Wonderful Wizard of Oz*'s movie counterpart. The kitchen from Kansas at the beginning of the booth was also quaint and cozy, while the staircase leading down from the second story was impressive with its flying monkey at the base that looked as if it was taken straight from the movie.

In a close second, Delta Tau Delta's *Journey to the Center of the Earth* booth had a similarly impressive staircase that replicated the feeling of walking into the depth's of the Earth's many layers. The loud, crushing sounds that reverberated around the staircase and a special mirror illusion added to the effect of walking into a never-ending space.

### The Pong Boothy for Best Game

Phi Delta Theta's Oculus Rift game at their *Twenty Thousand Leagues Under the Sea* booth went above and beyond to deliver a unique experience to the user. Guests put the virtual reality headset on and then proceeded to shoot the giant squid from the book out of the water to save the Nautilus submarine. The game

was not only immersive, but generally seamless and fun to play. Other game, like the Singapore Students' Association's *The Little Prince* game, were right up there with Phi Delta's. The game had two users interact with a touchscreen to dig up plants that popped up on the screen. However, Phi Delta's booth took the cake with its game's impressive scope.

## Awards Ceremony Results

### Blitz

- 1) MCS Hunger Games
- 2) Mayur: Aladdin
- 3) Math Club: What If?

### Independent

- 1) TSA: Life of Pi
- 2) ASA: Cloudy with a Chance of Meatballs
- 3) KGB: Where the Sidewalk Ends

### Sorority

- 1) Kappa Alpha Theta: Wizard of Oz
- 2) Kappa Kappa Gamma: The Magic Treehouse
- 3) Delta Delta Delta: Where the Wild Things Are

### Fraternity

- 1) Alpha Epsilon Pi: Jurassic Park
- 2) Sigma Phi Epsilon: The Polar Express
- 3) Delta Tau Delta: Journey to the Center

### The Andy Warhol Boothy for Best Art

The TSA incorporated impressive art into their *Life of Pi* booth. Not only did they place an elaborate mural on the outside of their building that gave the whole structure an ancient feel, but they also constructed a number of paper mâché animals that visitors could interact with. Among the animals were the book's iconic tiger in the equally iconic raft, a peacock, and a zebra. The art, both inside and outside, of this book captured the essence of the book perfectly.

### The Boothy for Most Family-Friendly Booth

The Asian Students Association (ASA) takes this award with their *Cloudy with a Chance of Meatballs* book. Of course, the theme of this booth automatically lends itself to a family-friendly atmosphere.

But ASA followed through with a fun fishing game for the kids. A stream pushed wooden food through the game's area. Players had to use a magnetic fishing rod to get the food. Overall, the booth had a light-hearted feel that had the potential to keep kids hanging around for much longer than they would at some of the more serious booths, like Student Dormitory Council's *Nineteen Eighty-Four* and Fringe's *Sherlock Holmes* booths.

### The Andrew Carnegie Boothy for Best Overall Booth

The Tartan's favorite booth overall was Alpha Epsilon Pi's *Jurassic Park*. All components of this booth were put together well, contributing to a structure with solid features all around. Not only was the game, which involved a gun and dinosaur targets, fun, but there were other impressive features like museum artifacts that contributed to a learning experience.

The fraternity's largest "Wow" factor was the real Jeep sitting at the bottom of the booth on the way out. The room containing the Jeep was a great place for photographs and, come on, there was a Jeep in a booth! For all these reasons, Alpha Epsilon Phi's booth squeezed out this best-of-booths award.

### Conclusion

While the 100th Spring Carnival had some of the best booths The Tartan has seen to date, this year's booths were able to compete with the booths created for last year's milestone event. The Living Library theme is, of course, a dream for avid literary fans like the members of The Tartan's staff.

However, theme aside, the booths this year were elaborate with some unique structural designs, the likes of which are rarely seen. Games were particularly enjoyable and the intricacy of the art adorning booth walls lived up to previous years.

This year, it showed once again that Carnegie Mellon's students have their hearts in this Spring Carnival main event. Here's to many more years of booth, although next year will most likely see booths constructed not on the Morewood Parking Lot, but in the lot next to the College of Fine Arts.

Will those booths live up to the ones constructed in the Morewood lot despite the possible logistical challenges of adapting to a new booth location? Time will tell, and the fourth annual Booth Awards will be here to dissect those structures.

**Braden Kelner** | Contributing Editor



Danielle Hu | Junior Photographer



Danielle Hu | Junior Photographer



Danielle Hu | Junior Photographer



Danielle Hu | Junior Photographer

From clockwise left: Math Club, KGB, MCS and were among the winning organizations for their booths. Booth topics varied from accessible children's literature to more adult novels.



# OPENING DAY

Midway opened Thursday afternoon with a small opening ceremony and a concert from Carnegie Mellon Kiltie Band.



Photos by **Matthew Nielsen** | Photo Staff

The opening ceremony featured the Kiltie band and speeches from Dean of Student Affairs Gina Casalegno (left) and the members of the Carnival Committee, who spoke about the Living Library theme and how it fits at Carnegie Mellon. The Kiltie band also performed a concert in the Midway tent.





# MATT AND KIM

The indie dance duo performed to a huge crowd on the Mall last Saturday, with an opening by RJD2.



Kevin Zheng | Assistant Photo Editor



Michelle Wan | Personnel Manager



Matthew Nielsen | Staff Photographer



Matthew Nielsen | Staff Photographer



Kevin Zheng | Assistant Photo Editor



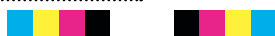
Matthew Nielsen | Staff Photographer



Matthew Nielsen | Staff Photographer



Matthew Nielsen | Staff Photographer







Abhinav Gautam | Photo Editor

# HOLI

Students and other members of the Carnegie Mellon community celebrated the Hindu festival of color, Holi, on the Saturday of Carnival. As part of the celebration, participants in white shirts threw colored powder at each other and enjoyed Indian food together.



Matthew Nielsen | Staff Photographer



Danielle Hu | Junior Photographer



Matthew Nielsen | Staff Photographer



Matthew Nielsen | Staff Photographer





# MIDWAY RIDES

A Ferris wheel and bumper cars were among the featured carnival rides on this year's Midway.



Abhinav Gautam | Photo Editor



Danielle Hu | Junior Photographer

# SCOTCH 'N'SODA

A thought-provoking musical, *Merrily We Roll Along* entertained a rowdy audience on Friday and Saturday.



Abhinav Gautam | Photo Editor



Danielle Hu | Junior Photographer



Danielle Hu | Junior Photographer



Danielle Hu | Junior Photographer



# BUGGY

Teams give their all in annual Buggy races Friday and Saturday mornings, and buggies of the past are displayed at the Buggy Showcase on Thursday.



Matthew Nielsen | Staff Photographer



Matthew Nielsen | Staff Photographer



Matthew Nielsen | Staff Photographer

**Left:** Junior mechanical engineering major Alp Erbug pushes junior biology major Sushma Narayan for Sigma Phi Epsilon's A team. **Top right:** Just a few of the Fringe buggies on display during the Buggy Showcase Thursday afternoon. **Bottom right:** An older Sigma Phi Epsilon buggy also on display at the Buggy Showcase.



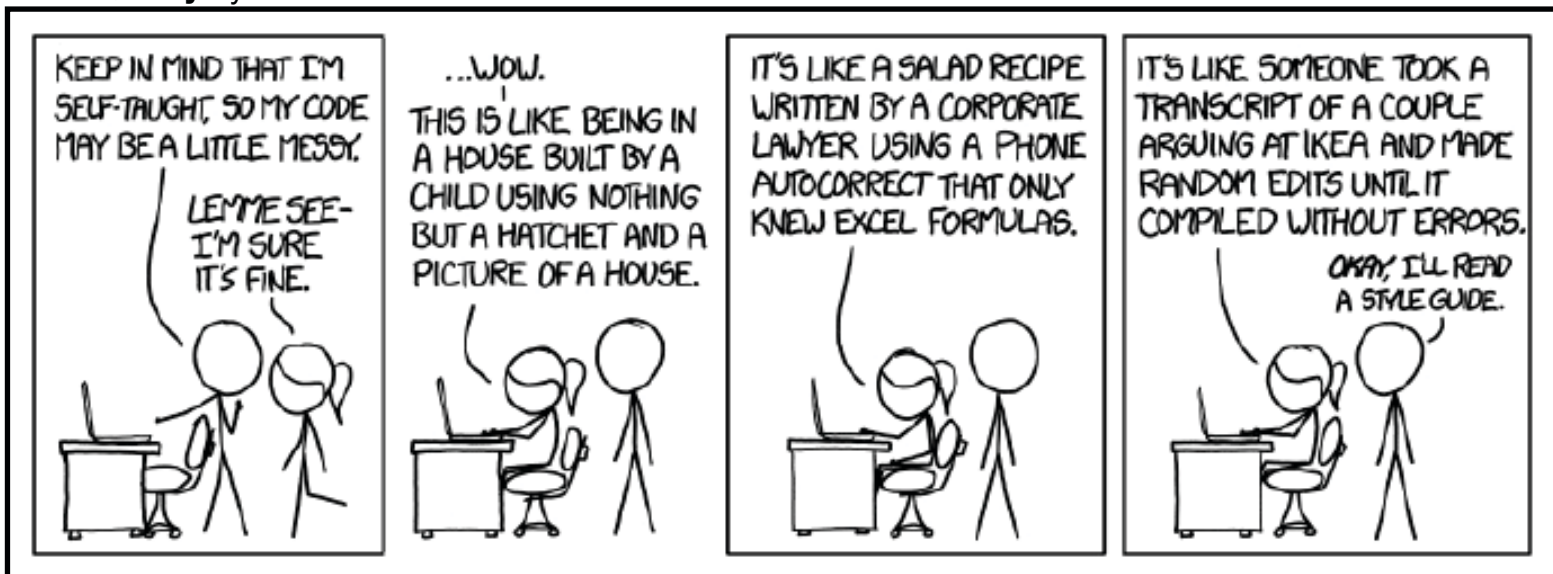




michell3@andrew.cmu.edu

michelledoeswhat.com

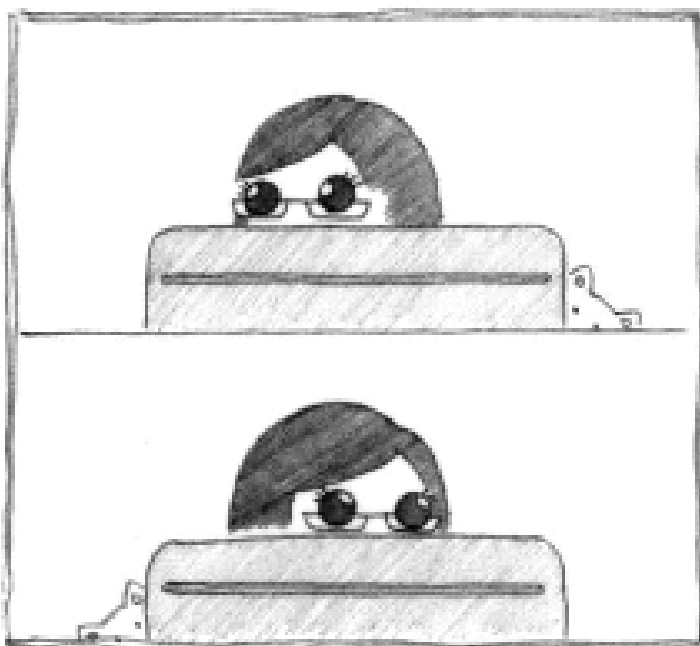
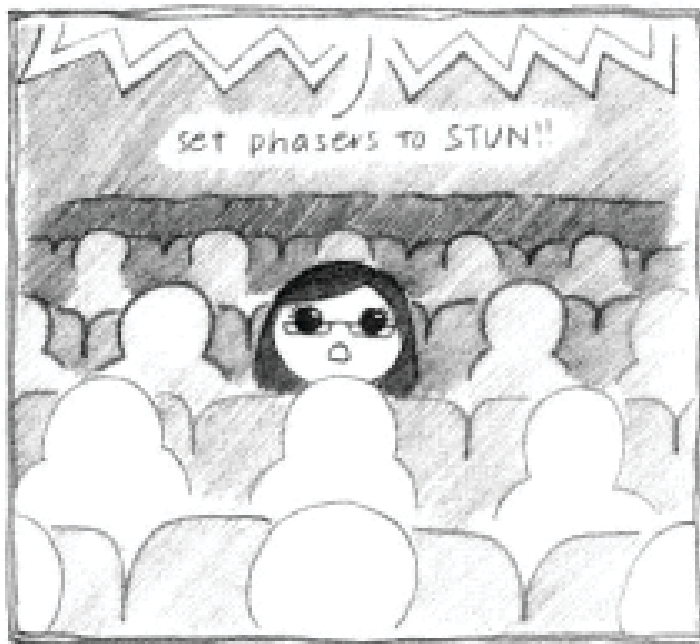
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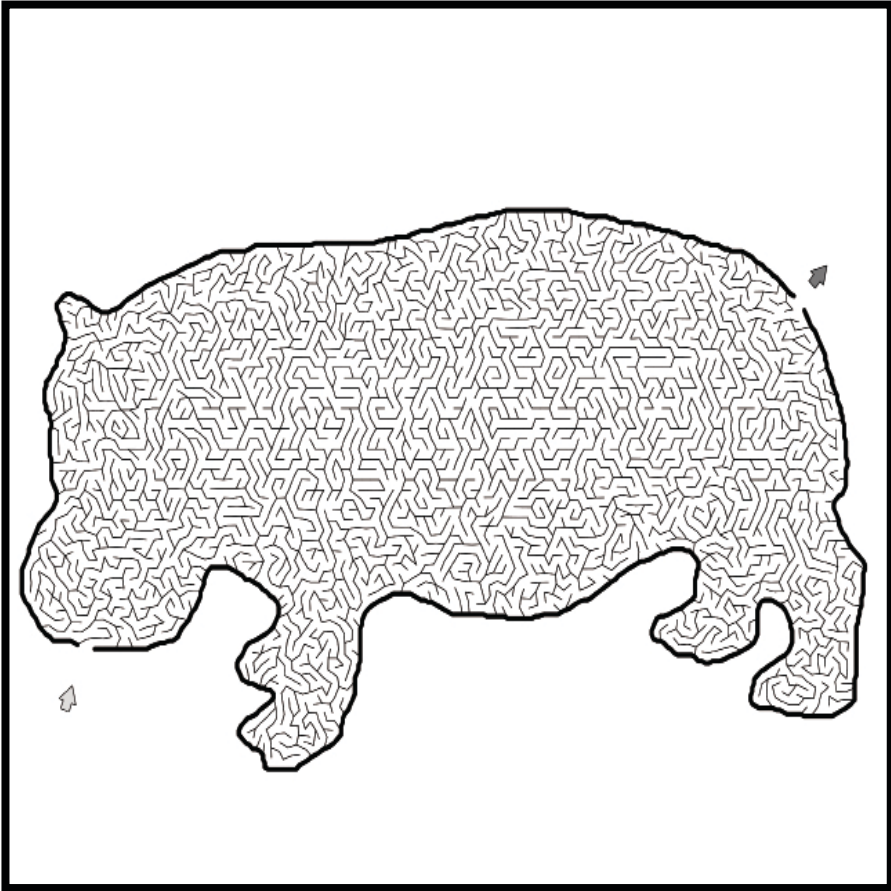
Sudoku Puzzle: Very Hard Difficulty

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

Sudoku courtesy of [www.krazydad.com](http://www.krazydad.com)

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

Maze Puzzle: Hard Difficulty



Maze courtesy of [www.krazydad.com](http://www.krazydad.com)

Start from the left bottom arrow of the maze and find your way out to the other arrow.

Solutions from April 13

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20							
A	L	E	E			L	O	T	T	O		B	A	L	M											
14	G	A	N	G			15	E	P	E	E	S		16	E	L	O	I								
17	A	C	C	O			18	U	N	T	A	N	T		19	L	A	S	S							
20	S	E	E	I	T									21	E	E	R	I	E	S	T					
						23	S	E	P					24	A	T	R	E	E							
25	C	H	E	T			26	L	O	G	S			27	A	V	A	S	T							
28	R	A	S				29	N	U	D	E			30	A	L	E	P	P	O						
31	O	U	T	C	O	M	E							32	R	A	I	D	E	R	S					
33	S	T	O	R	M	Y								34	A	T	R	A		R	I	C				
35	S	E	P	I	A									36	O	R	E	O		A	S	T				
						37	M	A	G	I	C			38	N	A	N									
39	D	E	C	I	M	A	L							40	S	T	A	L								
41	E	T	O	N										42	I	M	M	A	C	U	L	A	T	E		
43	E	R	M	A										44	N	A	A	C	P			45	E	R	D	A
46	D	E	A	L										47	S	N	E	E	R			48	R	E	S	H

Crossword

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

Sudoku



Maze



# Horoscopes

Which superhero would you be?

## aries

march 21–april 19

Aries are fearless leaders and no role is more fitting than Captain America. As the leaders of the Avengers, he relies on this physical strength, speed, agility and smarts to stay ahead of his foes.

## taurus

april 20–may 20

Known for being stubborn, but having a strong willpower and determination, Taurus's superhero is most like Green Lantern.

## gemini

may 21–june 21

The Wonder Twins' powers are perfect for the dual nature of Gemini. Their power is only activated when they touch each other and speak the words "Wonder Twin powers activate!"

## cancer

june 22–july 22

Sensitive, caring Cancers are sometimes shy and want to withdraw. Invisible Woman suits this role the most with her nurturing nature and naturally protective powers.

## leo

july 23–aug. 22

Leos describe themselves as the wallcrawler Spiderman, who fulfills Leos' drama-loving nature and need for attention.

## virgo

aug. 23–sept. 22

With his critical eye for detail, Robin is the ideal Virgo choice. Virgos are known for their intelligence and dark sense of humor, which are both evident in Robin's character.

## libra

sept. 23–oct. 22

Libra is ruled by Venus, the planet of love and beauty, which the gorgeous Wonder Woman embodies perfectly. She is kind, friendly, and out to fight for fairness.

## scorpio

oct. 23–nov. 21

The dark and mysterious Batman suits Scopios' personality the most. Batman doesn't actually have any superpowers, but is able to rely on his smarts and technology to beat his enemies.

## sagittarius

nov. 22–dec. 21

Adventure-loving Sagittarius can never stay in one place for too long, similar to the Norse god of thunder, Thor. His talents, similar to Sagittarius' powers, are speed, strength, and power of flight.

## capricorn

dec. 22–jan. 19

The earthy Capricorn is best represented by Superman. Like most Capricorns, this hero is grounded, solid, and loyal.

## aquarius

jan. 20–feb. 18

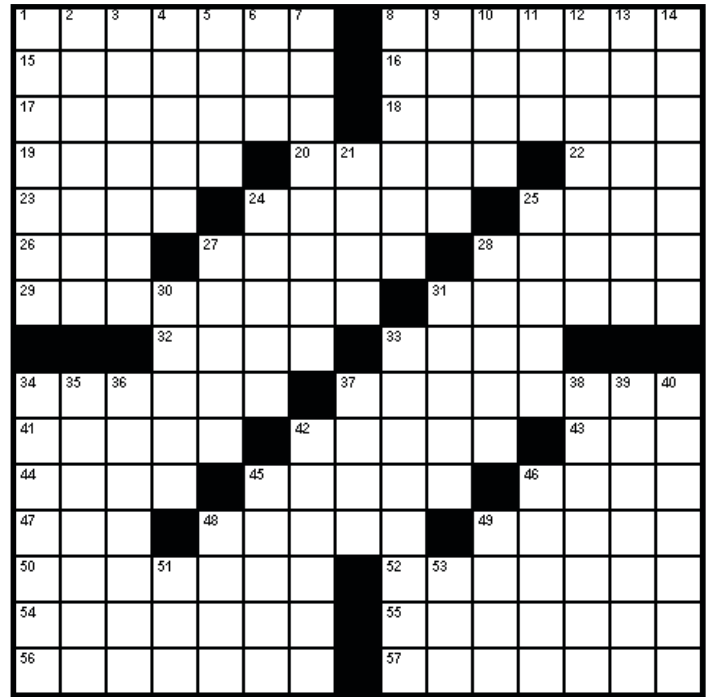
Aquarius is quirky, eccentric, forward thinking, and friendly. When it comes to Aquarian superpowers, Professor X is the best fit. A mutant with the most brilliant mind in the universe, he is the world's most powerful telepath.

## pisces

feb. 19–march 20

Naturally, Pisces' superhero would be Aquaman. He not only communicates with the marine life, he also captures the sensitivity and imagination of Pisces.

Maryyann Landlord | Comics Editor



Crossword courtesy of *BestCrosswords.com*

## ACROSS

- Initially
- Strained
- Testimonial
- Animal structure science
- Official permit
- Heavy napped woolen fabric
- Architectural piers
- One of the Leeward Islands
- Bikini top
- Milk choice
- Taj \_\_\_\_
- Toupees
- Sushi option
- Scoundrel
- Aspect
- Abnormally narrowed
- Sociable
- Frankfurt's river
- Improbable
- Conference
- Japanese dish
- Vinegary prefix
- Living in flowing water
- Moving vehicle
- Practical joke
- Stately home
- Poses
- Fuss
- Nymph chaser
- Without \_\_\_\_ in the world
- Companion of Daniel
- Unstable
- Affable
- Article of clothing
- Lounges
- Goes b

## DOWN

- Books of maps
- Small ornament
- Capable of being molded
- Steel girder
- Ancient letter
- Ave. crossers
- Mall-goer, often
- Immature insects
- For want of \_\_\_\_ ...
- Cave dwellers
- Legendary Giant
- Male European deer
- Appears
- Family of rulers
- Israel's Barak
- Saunter
- Inspire anew
- Copland ballet
- \_\_\_\_ acid (B vitamin)
- Nick of "Lorenzo's Oil"
- Yogi
- Custody
- Nightclothes
- Professoriate
- Store for safekeepin
- Electronics giant
- Flies
- Lake in central Scotland
- Six legged creatures
- Workshop machinery
- Twinned crystal
- Rapscallion
- Kemo \_\_\_\_
- Razor name
- Pillbox, e.g.
- Gal of song





## Carnegie Mellon University Philharmonic.

Carnegie Music Hall. 8 p.m.

With direction from Andrés Cárdenes, the Philharmonic will perform Samuel Barber's *Symphony in One Movement* and Ludwig van Beethoven's *Symphony No. 3 in E-Flat Major, Eroica*. The performance will also feature faculty member, soprano Jennifer Aylmer.

General admission is \$5. Students, staff, and faculty with a valid Carnegie Mellon or Pitt ID receive free admission.

**Friday 4/24/15**

## Beatles and British Invasion Tribute.

Mr. Small's Theatre. 7 p.m.

For the sixth year, AcoustiCafé presents an evening of local musicians performing covers of songs by The Beatles, The Kinks, The Rolling Stones and other classic British bands. The proceeds will all benefit ABOARD's Autism Connection of Pennsylvania.

Tickets are \$15 for general admission or \$30 for reserved balcony seating.

## Ongoing

## Elements.

The Hunt Institute (Hunt Library floor 5) Through June 30.

The Hunt Institute for Botanical Documentation presents its spring exhibition, "Elements." This exhibition features drawings and watercolors of bird nests and photographs of transitional landscapes inspired by the relationship of the nest to time, place, music and architecture. The featured artists are Sue Abramson, Wendy Brockman, David Morrison, and Kate Nessler. There is also a selection of birds, nests, and eggs on loan from the Carnegie Museum of Natural History.

## Three Sisters.

Purnell Center of the Arts. Philip Chosky Theater.

Anton Chekhov's renowned play *Three Sisters* is a critical, sad, and beautiful portrayal of provincial life. Olga, Masha, and Irina, the sisters, desire an exciting life and try to achieve their hopes and dreams. This ageless drama is translated by Paul Schmidt and is directed by Pamela Berlin. Tickets are \$10 with Carnegie Mellon ID, and are \$19.50 online. Performances are April 21–25.

## Oblivion.

City Theatre Company. Through April 26.

A comedy from Carly Mensch, a writer from the television show *Weeds*, the play *Oblivion* takes on the complex relationship between parents and adolescents, and what it means to grow up and be a family. Tickets start at \$36.

## Sketch to Structure.

Carnegie Museum of Art. Through Aug. 17.

This exhibition in the Heinz Architectural Center explores the process from an architect's initial concept to client presentation. Featuring a number of sketches by Lorcan O'Herlihy and Richard Neutra.

## Boeing Boeing.

CLO Cabaret. Through May 10.

This Tony Award-winning production from the 1960s tells the story of a Parisian player with three girlfriends, all flight attendants. He gets himself into trouble when, with the invention of a faster plane, they all come to town at once. Tickets are \$39.75.

# Classifieds

## Change kids' lives with KEYS AmeriCorps.

Join a team of over 90 members at 20 Pittsburgh summer camps for one unforgettable summer. Earn \$3,241 throughout the summer and a \$1,493 education award upon completion. May 26 – Aug 12.

Visit [www.keyservicecorps.org](http://www.keyservicecorps.org) or email [aaron.gray@alleghenycounty.us](mailto:aaron.gray@alleghenycounty.us).

## Smokers Wanted!

The University of Pittsburgh's Alcohol and Smoking Research Laboratory is looking for people to participate in a three-part research project. To participate, you must:

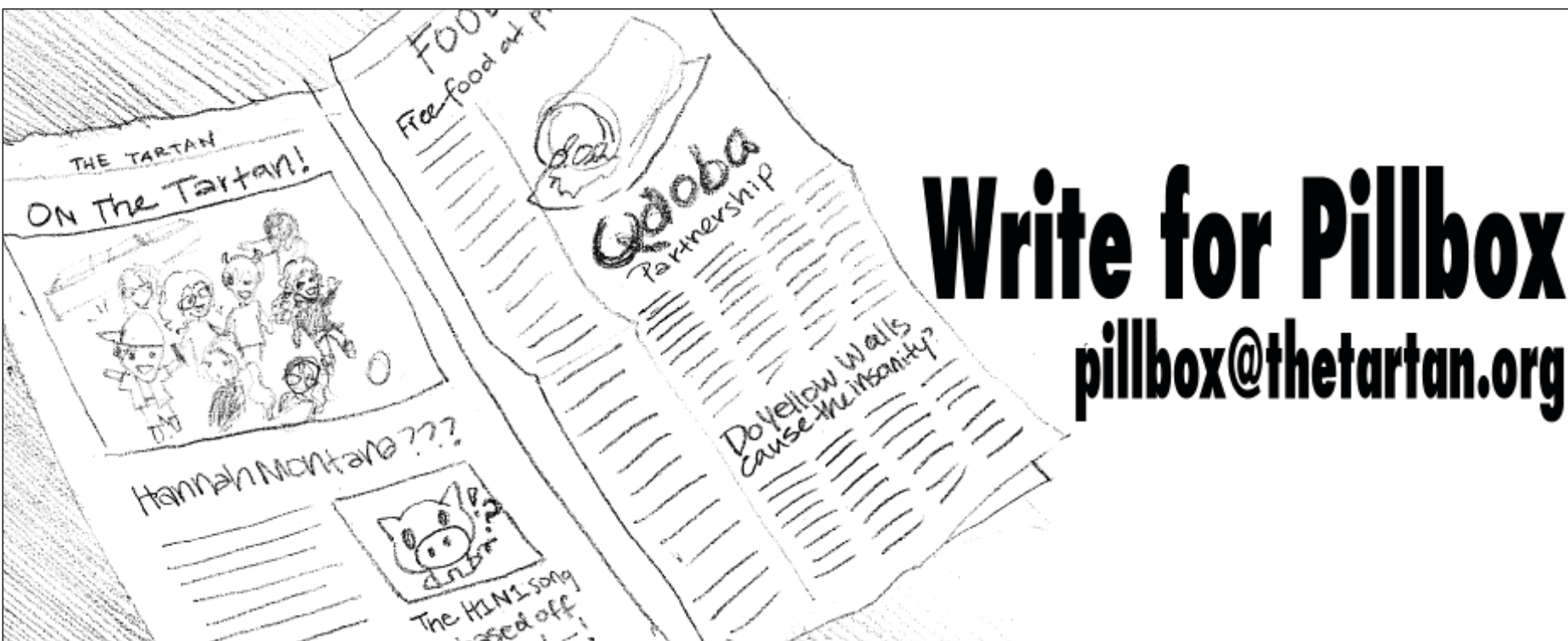
- Currently smoke cigarettes
- Be 18-55 years old, in good health, and speak fluent English
- Be willing to fill out questionnaires, and to not smoke before two sessions.

Earn \$150 for completing this study. For more information, call 412-624-8975

Compiled by **Sarah Gutekunst** | Operations Manager

Want your event here?

Email [calendar@thetartan.org](mailto:calendar@thetartan.org).



# Write for Pillbox

[pillbox@thetartan.org](mailto:pillbox@thetartan.org)



# origami petting zoo.



Abhinav Gautam | Photo Editor

Those at Carnival experienced a rare treat Saturday in the Jared L. Cohon University Center. The Origami Club constructed large paper animals. Current students, alumni, and families were encouraged to come and pet the creatures. Animals included penguins and a *Tyrannosaurus Rex*.

