

# Laura Chinchilla shares her hopes for Latin America’s future



Evangeline Liu/Staff Photographer  
Laura Chinchilla, former Costa Rican president, at Carnegie Mellon.

**NORA MATTSON**  
*Assistant News Editor*

Though Laura Chinchilla, former president of Costa Rica, has spent fourteen years in public office and only one year as a fellow at Georgetown University, the tone struck in her talk on Wednesday, Nov. 1, was decidedly more professorial than political. This event, sponsored by the Center for International Relations and Politics, the Office of Government Relations, and the Department of Modern Languages, explored Chinchilla’s hopes for the future of Latin America in the face of what she sees as the encroaching threat of populism.

conversations at Carnegie Mellon.”

He continued by highlighting the focus on analytical social science that Carnegie Mellon brings to policy discussions, joking that since this was Carnegie Mellon that, of course, the social science in question was analytical before also touching on how “analytical social science and interdisciplinary scholarship work together to broaden our perspective on major issues not just facing the United States but the world.”

For this purpose, Dr. Jahanian introduced former President Laura Chinchilla, reminding audiences that she was the first female president of Costa Rica and the fifth woman to be elected to lead Latin America in the past forty years before quipping that impressed audiences “can clap, if you want, by the way.”

Chinchilla started by bringing up that, though Latin America is often on the backburner of American Foreign policy, its social and political situation affects the U.S. in a way that few other regions do. “Trade, immigration, and drug trafficking are three of the more important domestic policy challenges that the United States faces today. And to succeed in all of them, it will require the action and cooperation of all of Latin America,” emphasized Chinchilla.

She finds that this

inattention to Latin America is where “precisely, lies the importance of academia in organizing events like this one to highlight priorities and redress long due policies within the public administration.” She echoed Dr. Jahanian’s point that events like these are necessary to reevaluate priorities in stating that “if academia continues to care about the relationship with Latin America, the government will not be able to ignore that call.”

In her analysis of the current political and economic situation of Latin America, she diagnosed the frequent fluctuations of Latin American economies as the reason for the lack of sustainable growth,

stating that “the variation in the economic cycle that has characterized our nations has also affected our social indicators.” She specifically brought up the example of Venezuela, noting that it had moved from being one of the largest economies in the world to a country in economic collapse, experiencing a humanitarian crisis. “Instead of devising new ways to expand democracies, some governments have come up with new ways to undermine it. Corruption, for example.” This is an issue that hits close to home for Chinchilla, as the *New York Times* cited anger about “unemployment, crime, and corruption scandals” as part of the reason she left office with one of the

lowest approval ratings of any Latin American leader.

Her talk was titled “Hope in Times of Populism,” so the bleak opening that cited the “strong sense of wasted opportunity” which she felt was unique to the region was surprising for many in the audience. After outlining the problem, she quickly assured that she “would like to take a kind of different approach today. I am a very strong critic of my own region because also I understand that criticism is very important to try to move everybody ahead.”

The “hope in times of populism” which the title of her talk referenced was that Latin America was poised to

See **CHINCHILLA**, A3



# Professor Dan Akerib discusses his research on dark matter

EVANGELINE LIU  
Staffwriter

In the twentieth century — and even in the late nineteenth century — evidence was discovered and eventually confirmed that the mass data analyzed from the visible mass of stars in galaxies did not match up with the masses that would be implied by the rotation rates of the galaxies. In particular, the observed rotation rates of galaxies were faster than would be possible if the only mass in the galaxies came from visible matter from stars; if that were the case, the galaxies would fly apart. Additionally, gravitational lensing of galaxy clusters could determine their masses and it was found that there was a significant mass that was unaccounted for by the visible matter we can detect. Thus, researchers hypothesized the existence of “dark matter” — a form of unseen, hard-to-detect matter that provides the necessary gravity to hold these fast-rotating galaxies together.

Dan Akerib, a professor of particle physics and astrophysics at Stanford University and researcher at the SLAC National Accelerator Laboratory (originally named the Stanford Linear Accelerator Center), was at Carnegie Mellon on Oct. 26 to give a lecture on his years of researching the nature of dark matter, which is still one of astrophysics’ greatest unsolved mysteries.

In an interview with The Tartan, Akerib explained how dark matter came to captivate

him. “I think that the idea that most of the matter in the universe is something that is different from us [is very fascinating]... someone described it as the ultimate Copernican revolution,” he reflected. He added, “not only are we not at the center of the universe, we’re not even made of the same stuff.”

Akerib started the lecture with a brief historical summary of the reasoning behind the dark matter hypothesis and noted the work of Vera Rubin, who pioneered the idea of graphing rotation rates versus distance from the center of the galaxy, which at outer distance ranges deviated significantly from the theoretical curve. Her work formed the foundation of the dark matter hypothesis and the basis of today’s research on the subject.

Akerib then summarized cosmological methods used by astronomers and astrophysicists to weigh the universe — in particular, to find the percentage composition of visible mass, dark matter, and energy in the universe. He explained that this ratio is significant as matter tends to attract while energy tends to repel. In particular, the three main methods that cosmologists use to find the ratios are supernovae standard candles, the 3K cosmic microwave background, and the matter distributions in the early and current universe. The results yield an energy density of approximately 70 percent.

Currently, one of the leading theories on the nature of dark matter is the WIMP theory, short

for “weakly interacting massive particles.” They are called “weakly interacting” because they do not form stars or interact much with normal matter and have very small cross sections, and “massive” because of the gravitational pull they exert. WIMPs are hypothesized to form in the Big Bang, and because they are hypothesized to have small cross sections when the universe was expanding, it would have been probabilistically difficult for WIMPs and anti-WIMPs in the early universe to find each other and annihilate. Akerib described WIMPs as “similar to very heavy neutrinos”.

The next step of the theory is always to find evidence for it, but so far detection of WIMPs has proved elusive. He explained that WIMPs are most likely not periodic table elements and electrically neutral; “ordinary matter is virtually invisible to this stuff” — as an example of just how little interaction they have with ordinary matter, he stated that WIMPs on average scatter once in a light-year of lead. WIMPs are, by definition, elusive to our eyes and instruments.

Luckily for WIMP researchers like Akerib, WIMP events occur on the order of 10 to the power of 16 times annually, so Akerib and his team have developed a detector to try and detect some of these events. The detector-building process faced a slew of technical challenges — electronic noise, the inability to detect signals below a certain range,

and the natural radioactivity scattered throughout the Earth’s crust that could interfere with the detector. Eventually, the detector was designed to be a chamber that held liquid xenon (to keep the radioactivity as low as possible in the center of the chamber), which would be ionized by the kinetic energy of the WIMP particles, creating an ionization that can be detected. The detector was housed in a large water pool a few meters underground to minimize interference from cosmic rays and other extraneous signals.

While the initial runs have not caught any events, Akerib and his team plan to continue their research by building a detector fifty times larger than the original one. Much of their everyday work consists of making and testing the wire meshes that go in the detector — which is very sensitive to the smallest imperfections — and purifying xenon gas samples using gas charcoal chromatography.

He detailed an anecdote from the building process: locals near the site of the upcoming detector were worried about radiation levels from the xenon, which turned out to be roughly equal to 20 bananas’ worth of radiation. As a reference, people get about 100 bananas’ dosage of radiation daily. “You can no longer buy bananas in the SLAC cafeteria because they’re radioactive [and would interfere with the sensitive detector],” he added.

The plan is to run the new detector for 1,000 days.







# DSF donates \$4 million to fund interdisciplinary research

**SHRUTI MURALI**  
*Assistant News Editor*

In a show of support towards the Mellon College of Science (MCS), the David Scaife Family (DSF) Charitable Foundation has donated \$4 million to fund the creation of a block grant program for interdisciplinary research projects in basic science. The grant program encourages research in fundamental avenues of science using a diverse range of disciplines, in order to serve as a lens to larger, more groundbreaking projects in the life sciences and in biomedicine. “Almost every big scientific discovery has started with basic science research, the same type of research that is being done in many of our labs at the Mellon College of Science,” said Rebecca W. Doerge, Dean of MCS, in a university press release. The unique root of this innovative grant program lies in the opportunity it provides student researchers in MCS’ Departments of Biological Sciences, Chemistry, Mathematical Sciences, and Physics to work with collaborators in other colleges. This helps foster greater creative

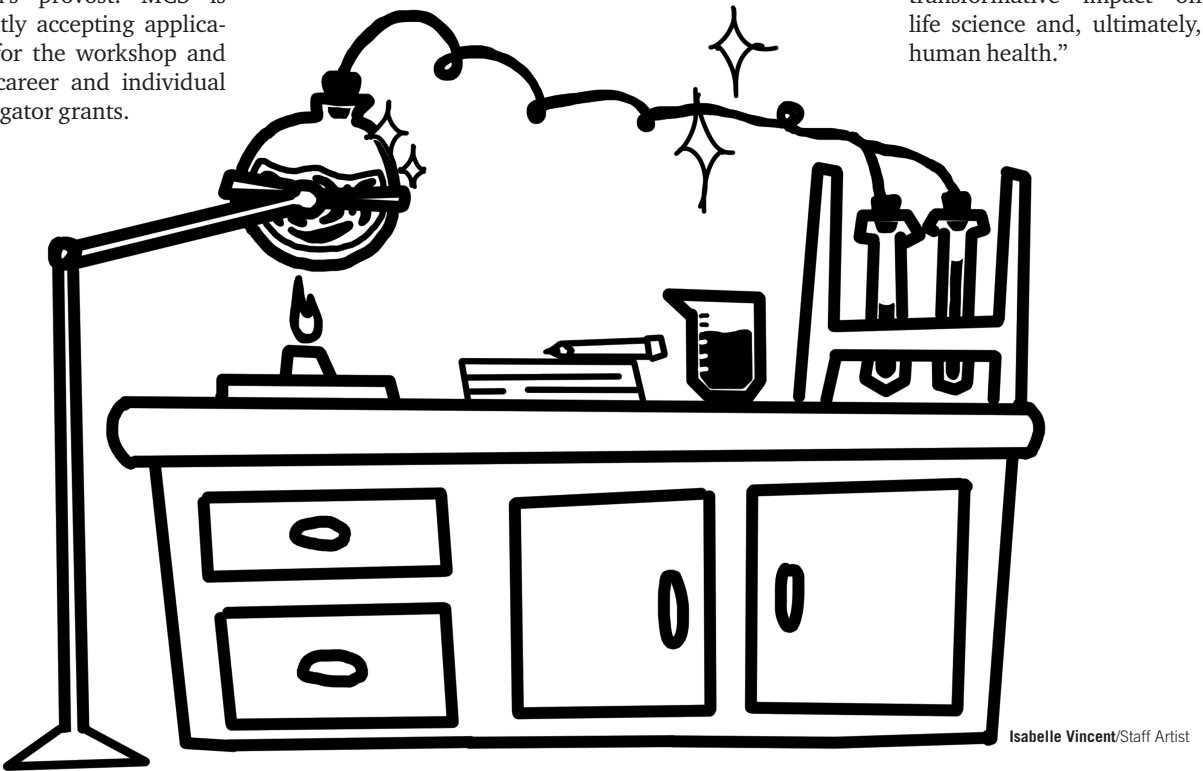
thinking and innovation through an interdisciplinary approach. “The future of science lies in fundamental, foundational research done by cross-disciplinary collaborations. The DSF Charitable Foundation is visionary in its willingness to support this type of work that will no doubt lead to the creation of tomorrow’s world-changing tools, technologies, and discoveries,” said Doerge. According to a university press release, DSF offers four types of grants, ranging from \$10,000 to \$1 million. They will fund research that investigates scientific inquiries with high societal impact but also will fund efforts that simply encourage the sharing of scientific knowledge. Smaller grants of up to \$20,000 will fund workshops that foster transdisciplinary collaborations; grants of up to \$150,000 will support the interdisciplinary research of early career faculty and individual investigators; grants of \$500,000 will help teams of scientists from multiple schools expand their current research to reach transformative levels; a “moonshot” grant

of \$1 million will support a high-risk, high-reward challenge that brings together scientists from different fields to collaborate on an impactful, yet difficult, scientific question. Grant applications will be vetted by a review committee, including the Dean of MCS and Carnegie Mellon’s provost. MCS is currently accepting applications for the workshop and early career and individual investigator grants.

DSF has given nearly \$9 million to Carnegie Mellon, with its largest gifts going to the creation and support of the Center for Nucleic Acids Science and Technology (CNAST). CNAST is an interdisciplinary research center in MCS that connects chemists, biologists, physicists, and engineers to study

DNA, RNA, and peptide nucleic acids to solve real-world problems, including the diagnosis and treatment of infectious disease, neurodegenerative disorders, and cancer. “Excellence in cross-disciplinary collaboration is a hallmark of research at Carnegie Mellon University,”

said Nick Beldecos, executive director of DSF, in a university press release. “The block grant program is intended to provide investigators with broad latitude to pursue novel directions in work of this kind. We at DSF are excited to play a role in supporting research that seeks to have a transformative impact on life science and, ultimately, human health.”



# Former president of Costa Rica visits Carnegie Mellon

**CHINCHILLA**, from A1  
combat what she saw as the problem that “the benefits of free trade, democracy, and globalization have been called into question.” She felt that “deepening democratic reforms,” by strengthening commercial ties with the rest of the world, attempting to create a robust middle class, and “advocating for a peaceful resolution to international conflict,” which she felt was a particular strength of the

region, could not only stabilize Latin America socially and economically but could serve to combat anti-globalist sentiment. She views this anti-globalist sentiment as inherently detrimental to democracy regardless of the ideological foundations, stating “it doesn’t matter if it is from the left or from the right, populism itself is something really terrible for a democracy because it does not have any kind of ideology,” when asked about left-wing

populist movements in the U.S. The points Chinchilla made in her talk strongly reflected her agenda during her tenure as president. In office, she reduced crime rates and combated the corruption that she so derided in her talk. She cited education as a means to avert populism, and it was under presidency that the Costa Rican constitution was amended to mandate that eight percent of the government’s money be spent on

education. Her experience also led her to warn the audience against viewing the shift from autocracy to democracy as a permanent one. The work she has done after her presidency, such as leading Electoral Observation Missions for the Organization of American States in the U.S. and Mexico, demonstrates her commitment to reinforcing the norms of international liberal democracy in political and academic spaces.



Evangeline Liu/Staff Photographer  
Laura Chinchilla visits Carnegie Mellon University to discuss populism.

# It Happens Here promotes transparency for acts of violence



Gowri Sunder/Staff Photographer  
Pictured above are donated artworks created by survivors of sexual assault and relationship abuse which were displayed at SAFE’s event, *It Happens Here*, on Friday Oct. 27 in the Cohon Center.

**SHRUTI MURALI**  
*Assistant News Editor*

Sexual Assault and Relationship Violence (SARV) is a pressing issue in today’s society, and affects a significant portion of Carnegie Mellon students. In the Spring of 2015, the university, in an effort to understand and assess the campus culture in regards to SARV, released a SARV study detailing instances of SARV among undergraduate, graduate, and PhD students on campus. Of the individuals who responded to the survey, it was reported that 26 percent of undergraduate women, nine percent of undergraduate men, eight percent of graduate women, and three percent of graduate men have experienced sexual assault since they enrolled at Carnegie Mellon. According to the Office of Title IX Initiatives, the

results of the SARV Study have emphasized the need to increase awareness and healthy relationships while educating people about relationship violence, teach community members how to identify signs of SARV, how to empower them to intervene when they recognize SARV in a relationship, and to inform community members on how to report SARV. Several organizations work to promote awareness about SARV to the public and educate and empower individuals who have been affected by SARV. One such organization is SAFE (SARV Activism for Everyone!), which was created by Carnegie Mellon students. SAFE is a student group which aims to prevent sexual assault and relationship violence on Carnegie Mellon’s campus by spreading awareness through activism. Initially known as Got Consent?,

the organization changed its name to SAFE. “We changed our name because we wanted to expand to cover all types of violence instead of just sexual violence,” said Naomi Shin, President of SAFE. In their most recent event on Friday, Oct. 27, *It Happens Here*, the organization displayed artwork in the forms of paintings, drawings, poetry, and photography, among others, to spread awareness about the impact of sexual assault and relationship violence and reveal stories of strength from sexual assault survivors. “Our main message is simply a reminder that sexual assault and relationship violence aren’t foreign things — they happen to your classmates, your friends, and can even happen to you,” said Shin. Among the artwork displayed was a

contemporary piece depicting an ironing board with a printed sheet of an arm. Behind the ironing board was a clothesline dangling with printed sheets depicting arms, legs, and a naked body. In addition to this powerful work of art was a poem titled, “Phoenix,” expressing the innermost feelings of an individual surviving sexual assault and how they were able to rise from the ashes even after their difficult experiences. Red wooden statues outlining the bodies of women held stories of horrific cases of sexual assault. A table was displayed in the corner with paintings and stories by children raised in abusive homes. A video played in the background voicing advice to survivors from other survivors of sexual assault. They were laden with words of strength and determination to empower

individuals to stand up for themselves and their safety. “Through this event, we wanted to serve and help survivors in our community by giving them an outlet while also impacting other members of Carnegie Mellon by inspiring people to take a couple of minutes from their days to think about tough topics like SARV and hopefully be more mindful of what they see with their peers,” said Shin. *It Happens Here* was first proposed last year by the organization’s advisor, Jess Klein. The organization decided to continue the event because of its effectiveness in raising awareness of domestic violence in a unique and creative manner. SAFE has also hosted other events to raise awareness of SARV. “Last semester, we held Take Back the Night, a national initiative that is

held slightly differently depending on the host. SAFE held it in the form of a mini protest/march leading to a safe space discussion in the [Cohon Center] where survivors could talk about their experiences,” said Shin. Through their varied efforts, SAFE is working towards spreading awareness about sexual assault and relationship violence to Carnegie Mellon students. They emphasize the gravity of the issue, and present ways to prevent and recognize SARV, as well as how to report it. The organization encourages members of the Carnegie Mellon community who have been impacted by sexual violence, relationship violence, stalking, or sexual harassment to report their concerns to the Office of Title IX Initiatives by calling (412) 268-7125 or emailing [tix@cmu.edu](mailto:tix@cmu.edu).



# Forum

FROM THE EDITORIAL BOARD

## Increased border control costs lives and money

Since the country was founded, the rhetoric of U.S. immigration policy has been a major focus of politicians. This holds especially true for the most recent presidential election cycle. Current U.S. President Donald Trump quite literally made the “wall” — metaphorical or physical — the slogan of his campaign, proposing a supposedly simple and clear-cut strategy to magically solve all the problems going on in this nation by keeping the people he views as inferior out.

As ridiculous as this kind of argument sounds, Trump went on to become the most powerful man in the country and is now implementing a plan against immigration in a country that was essentially built on immigration.

And yes, it’s sadly true that you have probably heard this argument enough times that you have grown numb to the unfortunate situations of undocumented immigrants; there’s not much you can do about it, because you are probably just an idealistic, powerless student. The situation is probably not that relatable anyway, because most of us at the university are either protected by the country as citizens or permanent residents, or are here with a valid visa, which means we don’t have to worry too much about being deported for literally just breathing the air in the United States. Maybe you even developed some kind of psychological coping mechanism and have already accepted the fact that life is just unfair like this. But for some, the problem is far more pressing, and far harder to escape.

Earlier this week, a children’s health facility in San Antonio, TX received ten-year-old Maria Hernandez, who has cerebral palsy. She was rushed to the hospital to undergo emergency gallbladder surgery. Her mother, who lives in Laredo illegally, could not come with her past the checkpoint north of the city. She is not alone, however. Her hospital room is guarded by police from Border Patrol, waiting to deport her right after she is released from the hospital.

And her way to the hospital was not exactly smooth. Diagnosed with several kidney stones

about a month ago, Hernandez’s doctor said she would need an emergency gallbladder surgery. Her ambulance was, however, stopped at the border to Texas that is located after Laredo because of the new hard-line policy put in place by the Trump administration. She was detained at the border with all other juvenile undocumented immigrants before she was sent to the hospital, accompanied by the police. She is effectively arrested and waiting to be deported at the moment, despite her disability and the fact that she is still waiting for treatment.

According to President Trump’s logic, preventing immigrants from coming into the country will solve monetary and security problems, and strengthening the border by pouring taxpayer money into expanding police forces is the only way to go. Trump’s administration not only beefed up the manpower at the southern U.S. border but also changed the priority of the deportation process. Prior to this administration, U.S. police forces focused on deporting criminals and other individuals that could pose harm to society. A lot less emphasis was placed on the undocumented immigrants who found work and a shelter in the U.S. and lived up to all the expectations and laws with the only exception of one missing document.

But now this landscape has changed. The administration gives all illegal and undocumented immigrants the same priority, meaning that anyone who stays in the United States without valid identification will be deported immediately. This policy abuses the “expedited removal,” a process put in place by earlier administrations to speed up the process of removal of criminals and avoid prison overflowing by skipping the process of going through a judge.

This abuse of expedited removal is an attempt to cut down the cost of deporting harmless civilians who most likely just want to work in the United States, but there lies an irony so glaring that it’s hard to overlook: the money, time, and manpower that go into hunting down illegal immigrants

and stopping them from coming into and staying in the country is ridiculous, and could be spent on doing more productive things, such as stopping children from dying. Somehow “turning our nation into an emergency room for the rest of the world” — the words of George Rodriguez, a conservative politician — is worse than blowing piles of cash to make sure that a disabled girl is detained and will get deported at the end of her treatment, arresting people who are working hard and trying to make a living in the United States, and building a physical wall at the southern border of the United States, which might have been a great strategy over a thousand years ago in China to keep the Huns outside the border, but is almost certainly outdated in a world where people can just casually fly across the border by purchasing an airplane ticket. The entire “saving money” consideration seems to break down when you really look into these aspects of the policy.

The homeland security argument, which seems like a somewhat valid concern at first, is also full of irony in the execution of the policy. How exactly is the administration going to make America a safer place when they spend all their time, manpower, and money on deporting people who are not threats to society? This change may create more jobs — we will need a lot more policemen to make sure that the undocumented criminals get deported — but just keep in mind that all that money could be spent on curing the sick instead of keeping them out of the hospital.

The fact that the government implements policies like this should disturb you every time. The majority of the people who call themselves “Americans” come from somewhere else, or their ancestors are from somewhere else. You could argue that you, or your ancestors, deserve to be treated better by the government because you are a part of the reasons why this nation turns out to be successful and strong, but also keep in mind that most of these immigrants left their homeland to produce their own successes, and they are making the nation stronger. It should disturb you that the government uses the money you make to watch people who need help die right in front of their eyes. We must make lawmakers aware that we will not stand for such deprivation of human rights just because someone is not a citizen of the U.S.

## Dialogue on assault heals more than hurts



MADELINE KIM

Although sexual misconduct is not a new topic, it is one that has generated many discussions recently. Brock Turner sparked national outrage after receiving a mere three months prison time for raping a woman and is again brought back by a criminology textbook that used him as the textbook definition of a rapist. Harvey Weinstein is now facing allegation after allegation, testimony after testimony. Now, Kevin Spacey, star of House of Cards, has found himself exposed for sexual misconduct, and the show will be canceled after the completion of this season.

What was once considered a relatively taboo topic is now discussed more, albeit still stigmatized to a significant degree. Social media platforms, most notably Twitter, saw an explosion of people tweeting “#MeToo,” indicating that they were victims of sexual misconduct. Although it is great that dialogue is continuing, there have been concerns that the extent of which it is being brought up is bringing a hysteria of rape cases and possibly creating false rape accusations.

Some are concerned that this will add to the rape culture hysteria. Although the “one in four” statistic has been shown to have been misleading and derived from a non-representative sample, this is still spread around and leads to even well-established news organizations such as *The New York Times* to use it in their headlines. Already, there are statistics that overestimate the prevalence of sexual misconduct; how would campaigns such as “#MeToo” affect our society? Could it possibly overestimate people’s perceptions of the likelihood of rape cases and thus lead to false reports?

It is naïve to believe that there will be no false rape accusation from this point forward in time, and frankly, no rational person would believe that the possibility of a false rape accusation does not exist. However, the chances of sexual misconduct going unreported appear to significantly supersede the probability of a false accusation. In 2015, just over two-thirds of rape cases were not reported to the police whereas the rate of a false rape allegation appears to be no higher than ten percent of all cases. Although the number of false rape accusations may go up in sheer numbers, the number of true rape accusations that actually go through the legal process will go up too, more likely at a faster rate. Of course, we need to ensure a just and fair trial for each case to ensure that the fewest perpetrators possible are found innocent and the fewest false perpetrators are not punished, but it is worth noting that the likelihood of a case going unreported is far greater than a false case being filed.

Something to keep in mind is that a study conducted by social scientists who analyze crime records estimate that the rate of false rape allegations falls between two to ten percent of all cases made. There are clear flaws made within this study. The sample includes only female victims on a college

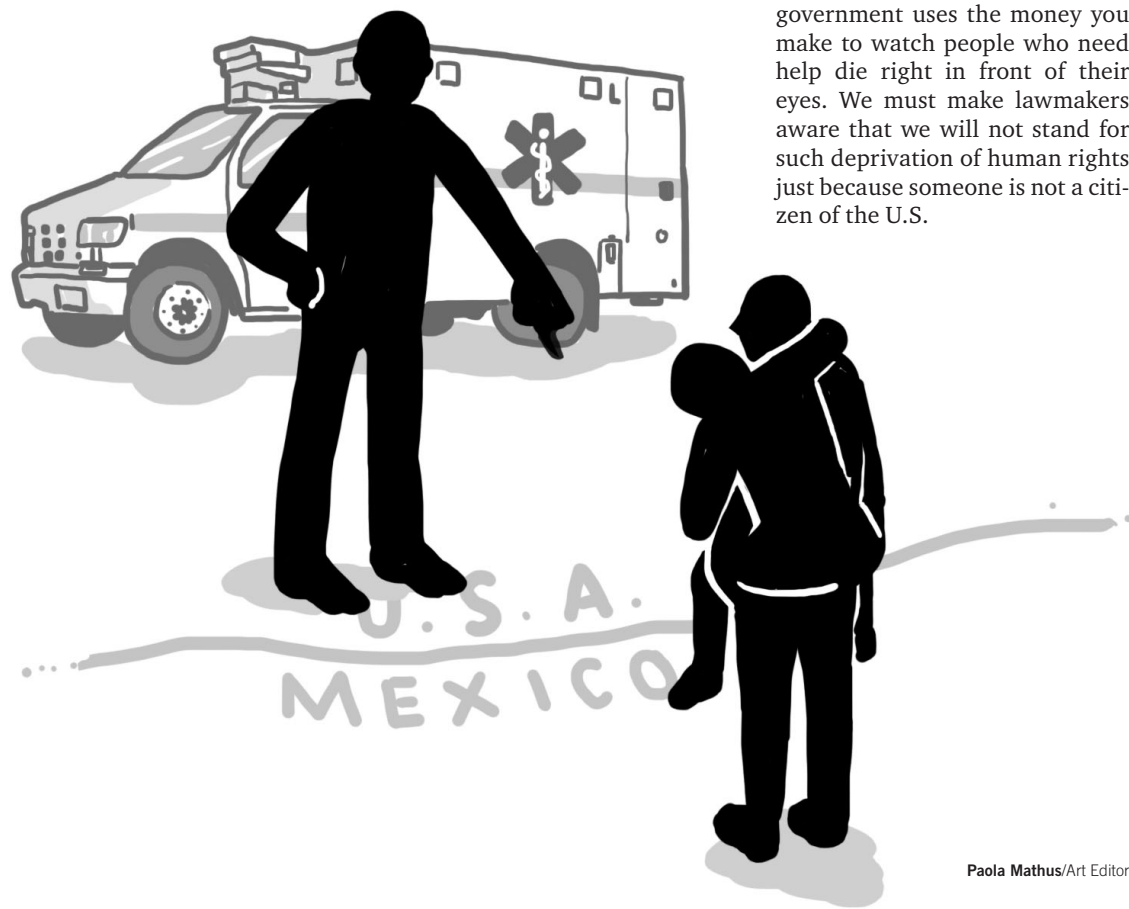
campus, which is not the only population affected by sexual misconduct by a long shot. Additionally, the study ran from 1998 to 2007, running a great risk of possibly being outdated. Most of all, however, the definition of false rape allegation means that the allegation is provably false — meaning, there is either conclusive proof that the rape did not occur or the accuser recants. However, in this study, their definition also includes cases in which there is not enough evidence to conclude that the rape did or did not occur. Despite these flaws, the study demonstrates that the number of allegations that end up to be true significantly outnumber the ones that are either inconclusive or false.

I was one of the thousands who posted “#MeToo” on their social media platforms, and as someone looking internally within, there are clear flaws with the movement. There are criticisms that claim that it can invade privacy or otherwise pressure people to publicly share their story even if they personally do not feel comfortable. Another possible criticism is that the campaign focuses predominately on cisgender women. Even though this is the demographic we often picture as victims of sexual misconduct, the statistics say that this is not inclusive. Transgender victims are often left out of the picture. A staggering number of cisgender males are victims, yet the dialogue for sexual misconduct often does not include cases outside of the male-perpetrator-female-victim paradigm. Even researching online and looking through the methodology of the case studies reported, a significant portion of the studies conducted had a strictly cisgender female sample. Looking forward, we must continue maintaining dialogue and informing others so that they can get the help and justice that they deserve, but we, as a society, also must do a better job at including a fairer sample that truly represents our diverse population, not just a mere fraction.

We may not, unfortunately, be able to completely eliminate sexual misconduct. However, we can take measures to prevent it and better help victims. We can share resources, such as the National Sexual Assault Hotline number at (800.656.HOPE). We can encourage people to seek their nearest emergency room after the incident. We can continue to educate people on the meaning of consent (no, silence does not equal consent), and we can break the paradigm that the cases of sexual misconduct lie mainly in the male-perpetrator-female-victim pattern. We can demand a healthcare system that will give better access for victims to seek psychological and psychiatric treatment so that money will not hinder them from getting the help they need.

Any of these things can increase the number of claims of sexual misconduct, which can possibly raise the number of false cases made. However, we cannot let the fear of a relatively small chance of a false claim being made stop us from reaching out to victims and ensure that they get access to justice and a path towards healing.

Madeline Kim (@madelink) is the Assistant Forum Editor for The Tartan.



Paola Mathus/Art Editor

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## THE TARTAN

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# Trump’s pick for head of NASA insults science and progress

JENNY YU  
Junior Staffwriter

The National Aeronautics Space Administration (NASA) is a dream-maker — an inspiration for children to go into the sciences and a professional aspiration for students and adults in the sciences. It has been the cornerstone of a number of momentous leaps in scientific progress, both in the history of our nation and in the world. From the moon landing to research on the Big Bang, NASA forefronts developments in aerospace science and collaborates with a number of other nations and international organizations.

For an organization as important as NASA, surely the President, who is entrusted with the duty of appointing an administrator, would want it to be headed by someone who can embody all those advances that it has made and will make, who can stand for the name of science and pushing boundaries. As many of us have seen, however, the Trump administration has made many decisions that are anything but expected (which, in its own way, may not be so surprising).

President Donald Trump has recently made the move of nominating Congressman Jim Bridenstine (R-OK) for NASA’s next administrator. It would be certainly unfair to immediately draw the conclusion that Bridenstine is unqualified at first glance, for Bridenstine is not without political experience nor administrative experience. In fact, he has been a director of the Tulsa Air and Space Museum and

Planetarium in the past, along with his career as a politician. And yet eyebrows are raised, however, after a careful scrutiny of some of his positions and viewpoints. First and foremost, he is a climate change denier. For someone in such a position of power, especially over a major scientific organization that spends a significant amount of its budget on climate research, to deny a stance that has achieved almost unanimous scientific consensus relays a poignant message. and

that message is not one that our nation should be proud to relay. It is not often in recent history that scientists reach such an overwhelming, universal consensus on a viewpoint, but when it does happen, as is the case with climate change, others should listen. Instead, Bridenstine ignores the overwhelming evidence and research against his perspective and clouds science with politics. Research, space exploration, climate change — these should not be tarnished with ulterior

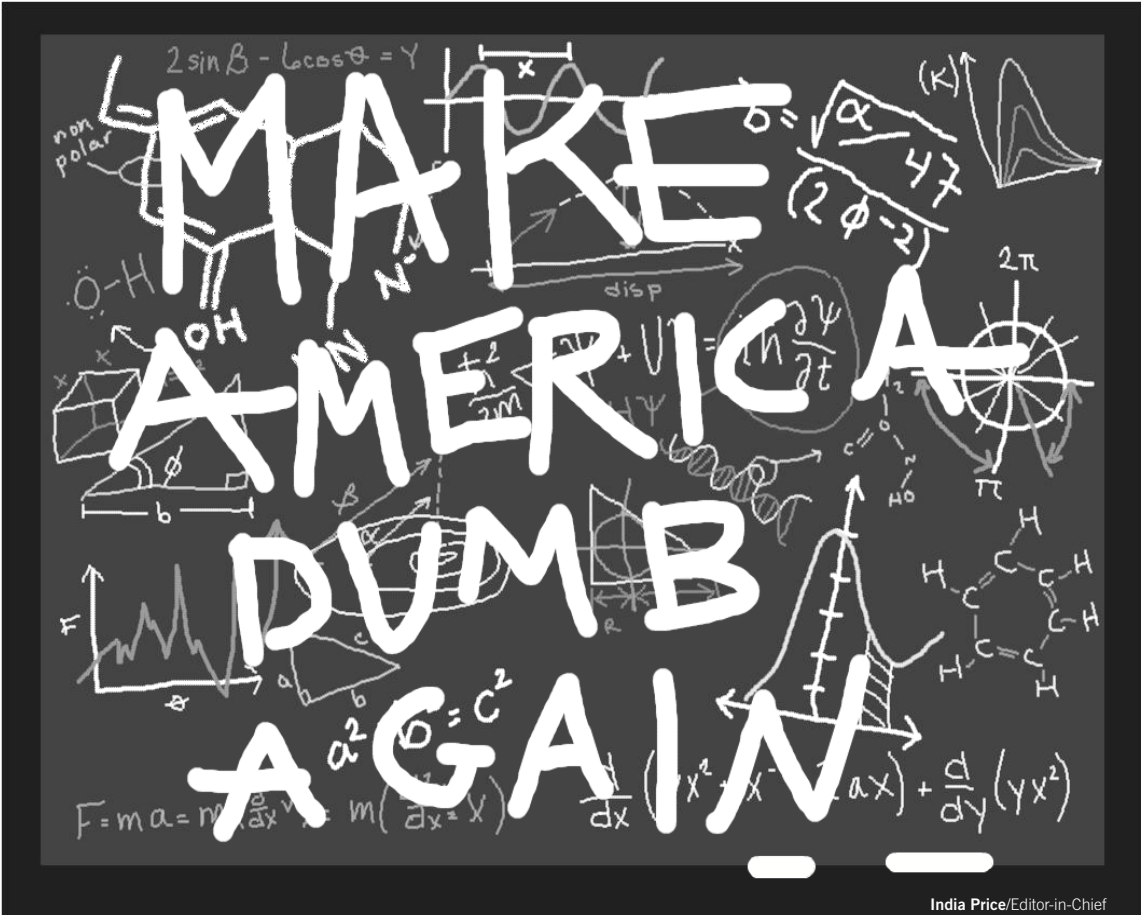
motives or agendas by politicians. They are about satiating an innate human curiosity present in all of us, not about attempting to create discordant feelings within the nation by blaming climate change as a hoax created by the Chinese, or about furthering corporate interest by cutting down on environmental protections. Politics should not play as large a role in science and the environment as it currently does, and by nominating Bridenstine, President Trumb has allowed his

own personal agenda to infiltrate science once again. Furthermore, the appointed administrator is as much a leader of NASA as a figurehead and symbol. Bridenstine’s reputation and potential actions will be important in determining how we, as a nation, are to be perceived by foreign as well as domestic powers. We will be, if we aren’t already, laughingstocks of the world should we appoint to the scientific stage someone who vocally and falsely claimed on the floor of Congress that global temperatures stopped rising 10 years ago.

So then what implications would all of this hold for the future of NASA as an organization? No doubt, the budget on climate research would be curtailed. While Bridenstine also does seem invested in space exploration, his reasons for it lie in the commercial side, for example, citing his desire for further lunar expeditions as a means of exploiting the moon’s resources.

There is a chance, of course, that my evaluation of Bridenstine as a person and as a political figure is completely off the mark, that he might turn out to be a good fit for the job, someone who will change NASA for the better. There is a much larger chance, however, that we have valid reasons to be concerned, judging by his statements and stances — and by Trump’s propensity for continuously nominating unfit candidates for national offices.

Only time will tell, but if nothing else, at least Trump has consistency.



# Money talks in America, where everything has a price



RAPHAEL OLIVIER  
Junior Staffwriter

Editor’s note: *Transatlantic Thoughts* is a weekly column that examines Carnegie Mellon’s student life from a foreigner’s perspective. Find previous installments @thetartan.org.

We promised two weeks ago that this column would soon broaden its scope and tackle topics related to America, and not simply Carnegie Mellon. Today’s topic will fulfill that promise, as I will develop a reflection about money, how people in the U.S. see it, and what the consequences of this relation are in the American society. The point is less

to state a moral judgment than to give some general sense and coherence to several interesting phenomena. In this process, I will touch on several important issues that could each merit a full article — but we won’t try to treat them exhaustively. It is indeed a well-known cliché that in America money occupies a very specific place — bigger than it is in Europe, for example. Here “money talks,” as they say. Although we will try to go further in the next paragraphs, this platitude is a good starting point, as my personal experience over the last few months tends to confirm. To put it in a nutshell, here in America, everything has a price. I can think of three types of situations where this principle becomes particularly obvious. First, there are extremely expensive services here that are free, more affordable, or substantially government-funded in many other countries. The example that comes immediately to mind is healthcare, which in the U.S. requires people to pay thousands of dollars a year in health insurance. Equivalent services in most developed

countries would cost several times less — when they are not free or reimbursed. This does not mean that everybody agrees with this situation, of course — but the mere fact that it exists states something about the American society. Another example, familiar to the student community, is education: tuition fees in the U.S. are probably the highest in the world. Of course, it comes with the best campuses and researchers, and scholarships exist to help those who cannot afford an education on their own. Still, education’s price in the U.S. is dictated by the law of the market, like any other commodity — despite the pressure it puts on students, as described in this column last week. Let’s move to a second type of situation. Like services are costly, even the most vital ones, jobs can be paid no matter how minute they might seem. I took notice of this on a recent trip to New York, when a

homeless person entered the bar I was in to collect empty cans and bottles. Actually, I didn’t understand what was happening at the moment; only later a friend explained to me that redeeming recyclables was a way to make a living for the poorest people. I understand well how it can be justified: bringing back recyclables to centers is a useful action that can be paid, and if giving this task to people in need can help them survive, so much the better. And yet, knowing that this practice has turned into a nation-wide service of people wandering streets all night to collect cans and earn five dollars is somehow a bit shocking in my opinion. It sort of evokes a *South Park* episode (like this recent one where unemployed rednecks get paid for doing Amazon Echo’s job in houses)

or, if you’re pessimistic, a *Black Mirror* pitch. The third kind of situation I am thinking about is a social relation. In America more than anywhere, I get the feeling that being nice to people is part of a job and deserves a payment — the tip of the iceberg being, well, tips. I have always been used to service included in almost every context, and having in every bar, every restaurant, to choose an amount — to judge with cash how friendly and helpful someone has been — is quite a change. In my opinion, you pay for a service, and being nice isn’t part of the service, it’s just how you’re supposed to act in social relations. And symmetrically I know there are Americans back from Europe who were just as surprised as I was, saying in shock “back there service is included, so nothing forced the waiter to be nice to me, I had to engage a conversation.” This is definitely a strong cultural gap, which I think is related to that same general American principle that everything comes with a price.

Before concluding this article there is a small paradox I would like to describe. Despite the importance that money can have in the U.S., I have been amazed by the lack of caution that is given to means of payments here. For example, to pay my rent, I basically just entered my account’s coordinates on the estate agent’s website, when I would have expected to confirm to my bank at least once that I authorize the payment. How could you prevent fraud with such a system? Another example is the fact that in restaurants, you often specify the tipping amount after having given and taken back your card — so they will edit the debited amount after you are gone. The insecurity related to money seems disproportionate to its importance, which I am unable to explain for now. In some future articles, I will try to push further this analysis. I believe that the current topic, although central in any analysis of American society, could be linked to equally fundamental topics, in particular, those of individual responsibility and contractual relations. But this is for another week.



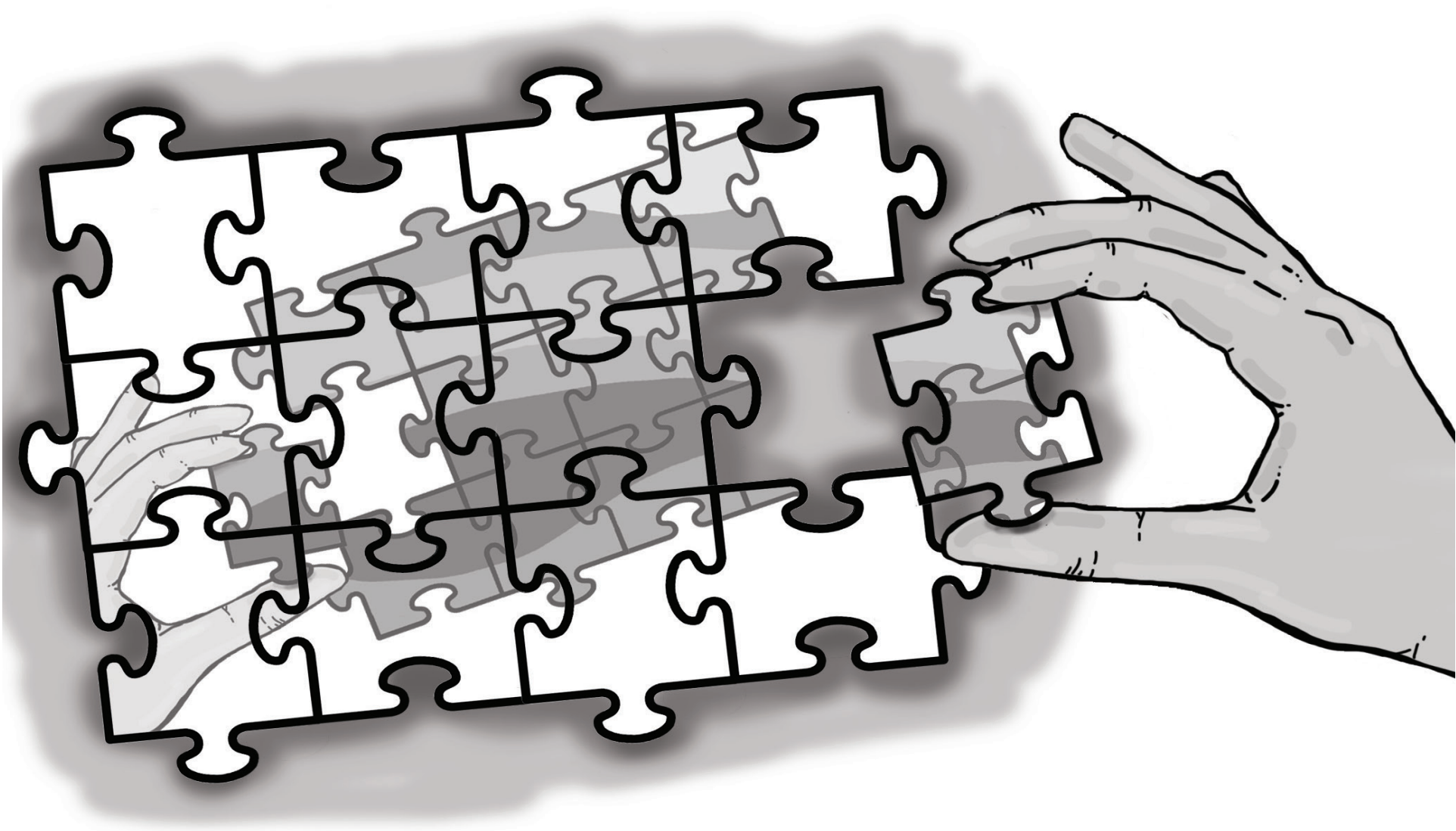
Bernice Yu/Staff Artist

Icon by Paola Mathus.



# Science & Technology

## Scientists conduct “delayed choice” experiment in space



NAVIYA SINGLA  
*SciTech Editor*

A photon, or a quantum of light, has been known to have both wave-like and particle like properties. It can behave like a speeding bullet-like particle or like a rippling wave, depending on the way it is studied, but not both at the same time. This uncertainty, in some sense, is the essence of quantum physics.

Between 1978 and 1984, James Archibald Wheeler — a pioneer in theoretical physics,

proposed a series of experiments to figure out whether photons “understand” their surrounding, and “chooses” to change its behavior depending on the system it is in.

While Wheeler’s proposed experiments have been performed several times, and by many different scientists on Earth, this is the first time these experiments have been performed in outer space.

Francesco Vedovato and Paolo Villoresi of the University of Padua, and their team have attempted to perform one

of Wheeler’s proposed experiments using a 1.5-meter telescope at the Matera Laser Ranging Observatory. Firing green laser pulses at the Beacon-C and Starlette satellites was part of the experiment.

The experiment involved passing a laser beam through a beam splitter which would split it into two, differently polarize them (one horizontal and one vertical) and then send the two beams of lights into space. One of the beams was on a longer path, which made it lag

behind. These two beams were then reflected off a satellite, subjected to a possible swap of their polarizations based on a random signal from a computer, and then passed through the beam splitter again. If their polarizations were swapped, the gap between the two beams would widen, making them both behave like particles. If it wasn’t reversed, then the two waves would combine, making the light behave as waves.

The random signal, that controls the polar-

ization in the second half of the experiment (after the reflection off the satellite), is the “delayed choice” part of the experiment. This “delayed choice” refers to the fact the light that is being bounced off the satellite has no way of “knowing” whether it should be a particle or a wave, and therefore shouldn’t be able to “choose” to behave in a certain way.

This simply confirms the fact that most behavior of objects in the universe is undetermined until forces act on them,

to force them to behave in a certain way.

Jean-François Roch, a physicist at the École Normale Supérieure in Paris, who conducted a more stringent version of Wheeler’s experiments in 2007 said in an article in *Science*, “This area where you mix quantum mechanics and relativity is still relatively unexplored, ... and this is the sort of experiment that raised the possibility of probing the link” between the two.

The team’s findings were published in *Science Advances* on Oct. 25.

India Price/ Editor-in-Chief

## CMU, Pitt team identifies suicidal individuals with fMRI

SARAH KIM  
*Staffwriter*

One reason suicide is so unfortunately difficult to predict and prevent is because of its unpredictability. In some cases, suicidal people choose to conceal their struggles and scars, so on the outside they may seem perfectly fine. When they take their own life, they leave behind a trail of unanswered questions and regrets — “Why didn’t I see this coming? What could I have done to help them?” The consistency in high suicide rates is such a dark and alarming phenomenon that would be easy to take down if we could know when someone in depression turns their thoughts into action.

Researchers at Carnegie Mellon University and the University of Pittsburgh may have taken us a step closer to suicide prevention. On Oct. 30, Professor Marcel Just and Professor David Brent from Pitt announced that they have developed an approach to identify individuals with suicidal thoughts by analyzing brain activity when they think of concepts like death or cruelty. Just and Brent used fMRI to monitor the neural responses of 34 subjects — 17 suicidal, 17 control subjects — to a list of 30 words. The list contained words

with positive, negative, and suicidal connotations, and the researchers asked each participant to think for three seconds about each word. They then recorded cerebral blood flow to infer which parts of the brain were activated. An algorithm was then used to differentiate whether or not the participant had suicidal thoughts.

Just and Brent were able to find that the algorithm successfully classifies a participant as “suicidal” 91 percent of the time. They found that six words were especially good predictors that activated certain areas of the brain much more than other words: death, cruelty, trouble, carefree, good, and praise. They then focused on the six words and used a similar approach to test if the algorithm could identify the participants who had experience of a suicide attempt or self-harm. They were able to find that the algorithm could accurately find the participants who had attempted to take their lives with 94 percent accuracy.

These results open the window for so many new potential applications in psychiatry. According to Professor Brent, “the most immediate need is to apply these findings to a much larger sample and then use it to predict future suicide attempts.

It could give clinicians in the future a way to identify, monitor and perhaps intervene with the altered and often distorted thinking that so often characterizes seriously suicidal individuals.”

Not only do the results of this research help clinicians identify individuals with suicidal thoughts, but they also suggest new methods of treatment and therapy for those in depression. The study showed that the concept of “death” evoked relatively more shame and sadness in the group of participants that had thought about suicide. This information can easily be used by psychiatrists to gear their therapy to tailor the specific emotional needs of their patients.

However, this does not mean that the technique is perfect. According to science magazine *WIRED*, fMRI scans have certain shortcomings that suggest they may not be perfectly accurate indicators of brain activity. Especially with a relatively small sample size of 34 participants, it is difficult to guarantee that the algorithm will be successful for every single individual with suicidal thoughts.

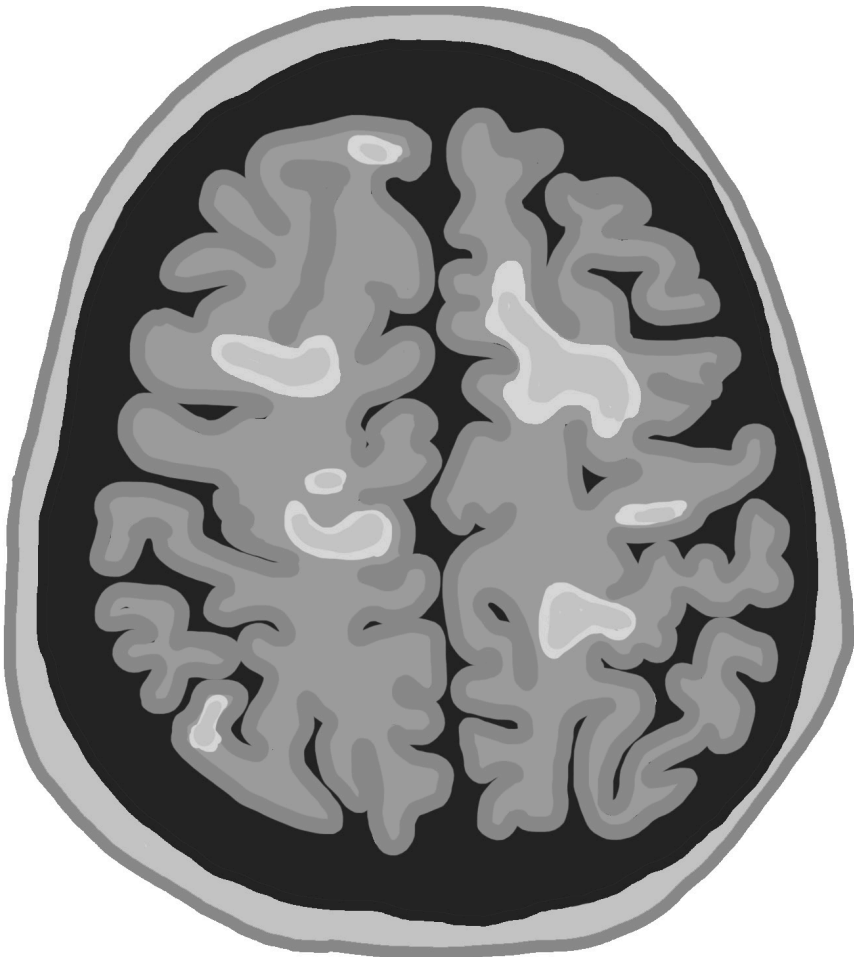
It’s also extremely crucial not to confuse correlation with causation. Just because two things occur at the same time doesn’t

prove that one causes the other — in this case, more testing would be necessary to indisputably prove that the suicidal thoughts caused distinct brain activity. According to Professor Just, “comparing groups of individuals with or without suicide risk isn’t the same thing as holding up a brain scan and assigning its owner

a likelihood of going through with it.”


But the results of their study definitely point us in the right direction. A study published in the *Journal of Clinical Psychiatry* showed that nearly 80 percent of the people who committed suicide in the hospital or immediately after discharge denied thinking about suicide to their

assigned medical professional. This serves to show how reluctant people with dark thoughts may be to share their emotional states, and how the need for a method to scientifically and methodically predict suicide is growing. Clearly, it’s better to know the brain is doing something than knowing nothing at all.



Isabelle Vincent/ Staff Artist





### Summer Employment at Carnegie Mellon: Teaching Assistant and Residential Counselor Jobs in the Pennsylvania Governor's School for the Sciences

Undergraduate summer employment at Carnegie Mellon University is available with the Pennsylvania Governor's School for the Sciences (PGSS). The PGSS is a five-week summer school for extremely talented high school students from Pennsylvania. Teaching Assistant/Counselor appointments are available in the areas of biology, chemistry, computer science, physics and mathematics. In addition, one or two positions may be available as Co-Directors of Residential Life. Academic duties of the TA/Counselor include assisting with lecture and lab courses and mentoring team research projects. Counselor duties of the TA/Counselor include living in the same dormitory as the PGSS students, ensuring that students adhere to the PGSS disciplinary rules, providing tutorial help in the academic program, and arranging and conducting social activities. Co-Directors of Residential Life (a.k.a. Head Counselors) are responsible for overseeing the TA/Counselors and fostering a safe, collaborative living and learning environment for the PGSS students.

TA/Counselor applicants should have finished their sophomore year by the start of the summer program. Consideration will also be given to extraordinarily qualified first-year applicants. Preference will be given to applicants with strong academic records and strong social skills. Prior experience with PGSS or a similar summer program is preferred, but not required. Applicants for Co-Director of Residential Life should have graduated from college or university by the start of the summer program. Further information is available at the PGSS web site: <http://sciences.pa-gov-schools.org/>.

**Stipend for five-and-one-half week period:**  
**\$2,500 for new TA/Counselors, \$2,750 for returning TA/Counselors**  
**\$3,000 for Co-Director of Residential Life**

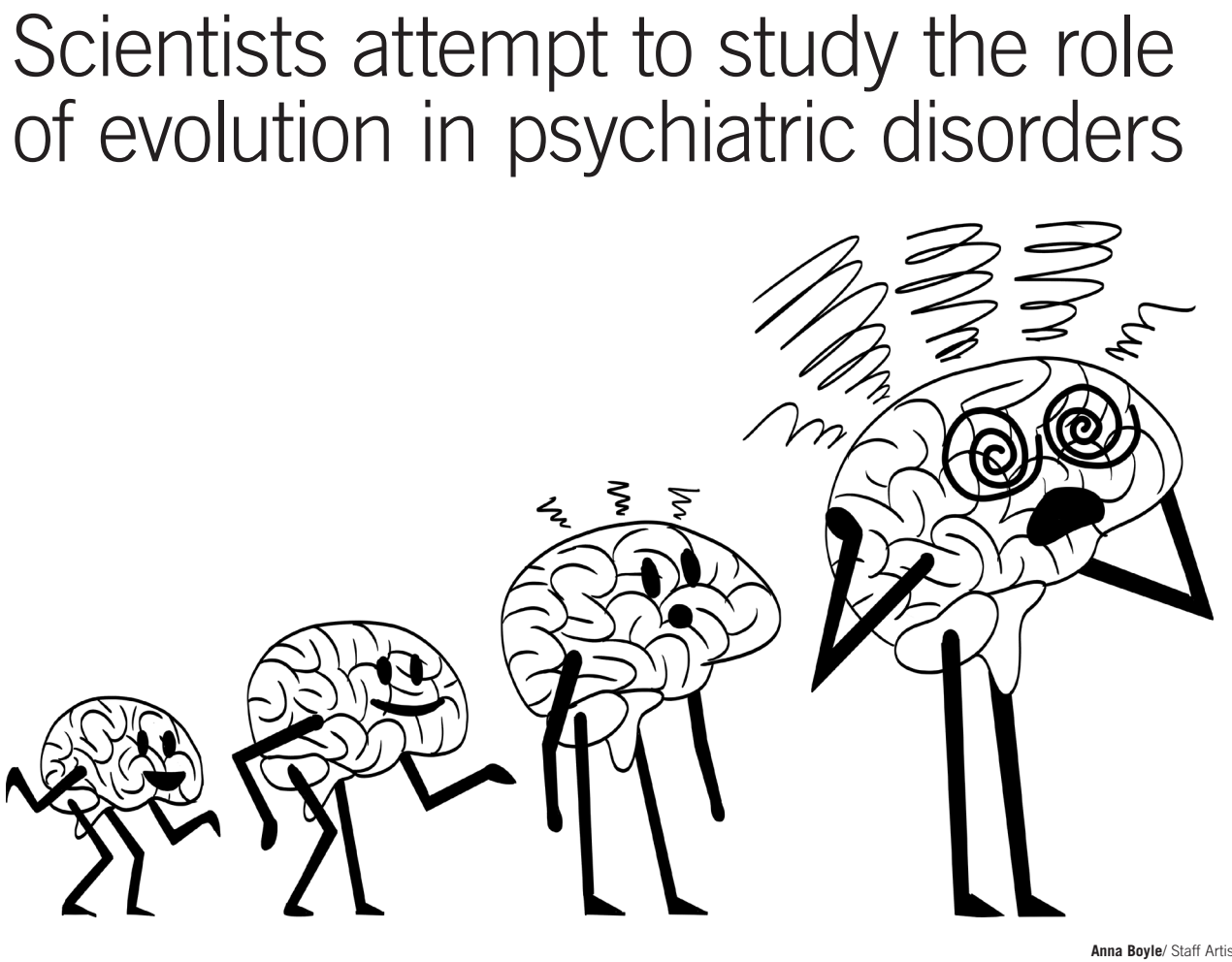
**Housing is included (in the PGSS dorm) as well as a food allowance.**

**Duties begin Wednesday, June 27, 2018, end Sunday, August 5, 2018.**

Applications are available from the PGSS Office in DH A301 or may be downloaded (pdf format) from the PGSS web site: <http://sciences.pa-gov-schools.org/>

Contact the PGSS Program Office at (412) 268-6669 or e-mail [pgss@cmu.edu](mailto:pgss@cmu.edu)

**Application Deadline: March 31, 2018**  
(Applications may be accepted after the deadline until all positions are filled.)



Anna Boyle/ Staff Artist

**EMMA FLICKINGER**  
*Assistant SciTech Editor*

Genes are at least partly responsible for most psychiatric disorders. But if certain genes cause severe problems like schizophrenia, why hasn't evolution eliminated them?

The evolution of psychiatric disorders has historically been difficult for researchers to study because most psychiatric disorders are polygenic (influenced by many genes, not just by a single allele). The number of genes causing a psychiatric disorder to be expressed can be in the hundreds or thousands. To learn more about the disorder's evolution, researchers must sequence each of these genetic regions and figure out how they've changed over time. This requires access to huge amounts of data on the human genome, something hard to come by. According to biology writer Sara Reardon, "But, the advent

of massive human genome databases is enabling researchers to look for possible connections between mental illnesses and the environmental and societal conditions that might have driven their emergence and development."

Biologists around the world are exploring these connections in unique ways. By looking for correlations in huge datasets, Yale geneticist Renato Polimanti is trying to uncover relations between environmental factors and the expression of mental illnesses. His team examined thousands of genetic samples and environmental data points from across Europe, and found that people in colder regions had a higher risk for schizophrenia. Reardon writes, "If genes that helped people tolerate cold were located close to variants that promote schizophrenia in the genome, then the latter could have been inadvertently carried along during evolution as a fellow traveler." However, the correlation may not be so straightforward, Reardon continues: "unknown environmental conditions in the past could have selected for traits that were advantageous then, but considered negative today."

Bernard Crespi, an evolutionary biologist at Simon Fraser University, explains that schizophrenia is tightly tied to parts of the brain that allow us to produce speech. If the genes for speech and the schizophrenia genes are closely related, it's possible that the speech genes were prioritized in human evolution, bringing schizophrenia genes along for the ride in a mechanism similar to Polimanti's 'cold' gene hypothesis.

In another approach, biologists are comparing the genetic processes of modern humans to Neanderthals to learn more about how genes evolved. Tony Capra and Laura Colbran, geneticists at Vanderbilt University, are studying how the same exact genes are expressed differently in the two species. For example, both modern humans and Neanderthals carry the gene FOXP2, associated with language, but our abilities to use language are greater.

One explanation is that differences in the way FOXP2 is processed allows modern humans to produce more of the protein encoded by FOXP2. Capra and Colbran's team hope that by learning more about Neanderthal brains, they will be able to find out whether they experienced psychiatric disorders the same way humans do today.

Our understanding of the evolution of mental illness is still developing. However, as more genetic databases become available, existing research can be confirmed and expanded, and new research can be developed.

SCITECH BRIEFS

New artificial cells can produce insulin for diabetic people

People with diabetes are unable to produce insulin in their own body due to dysfunctional beta islet cells in the pancreas, which naturally produce insulin.

In the October 2017 online version of *Nature Chemical Biology*, researchers published a study called "Synthetic beta cells for fusion-mediated dynamic insulin secretion" about cells they synthetically made in the lab that produce insulin similar to how beta islet cells do. The cells were injected into diabetic mice. The experiment showed that the cells can regulate blood sugar for up to five days.

Diabetes affects more than 400 million people worldwide. According to the American Diabetes Association, around 30 million people in the United States have diabetes. Currently, people with diabetes have to check their blood sugar level several times a day and manually inject insulin. With this study, artificial cells can provide a viable treatment for patients in the future and have a lot of possibility. According to *Science News*, "unlike transplanted beta cells — or other types of real cells genetically engineered to release insulin for diabetes treatment — these artificial cells could be mass-produced and have a much longer shelf life than live cells."

Planetary system may be closer than previously believed

The closest star to our Sun is called Proxima Centauri. Since 2010, researchers have known that Proxima Centauri is orbited by a terrestrial planet, Proxima Centauri b.

Recently, an observatory in Chile has discovered a dust cloud around Proxima Centauri, signaling the possibility of a planetary system.

"The dust around Proxima is important because, following the discovery of the terrestrial planet Proxima Centauri b, it's the first indication of the presence of an elaborate planetary system, and not just a single planet, around the star closest to our Sun," said lead author Guillem Anglada.

"This result suggests that Proxima Centauri may have a multiple planet system with a rich history of interactions that resulted in the formation of a dust belt. Further study may also provide information that might point to the locations of as yet unidentified additional planets."

There are rudimentary plans in place to explore the this planetary system, primarily a project called Starshot. Starshot, which has support from famous scientists like Stephen Hawking, plans to send probes to Proxima Centauri on tiny, ultralight spacecraft powered by solar sails.

New orangutan species could go extinct soon

Until recently, scientists believed there to be only two species of orangutan — Sumatran and Bornean. However, a new species of orangutan has been discovered, called Pongo tapanuliensis.

They were discovered in Batang Toru forest in Sumatra, Indonesia. While the two known species of orangutan are already on the endangered species list, this new species is estimated to only contain 800 individuals.

"The Batang Toru orangutans appear to be direct descendants of the initial orangutans that had migrated from mainland Asia, and thus constitute the oldest evolutionary line within the genus Pongo," said study co-author Alexander Nater of the University of Zurich, in a statement to The Verge.

"Great apes are among the best-studied species in the world," said study co-author Erik Meijaard of the Australian National University.

"If after 200 years of serious biological research we can still find new species in this group, what does it tell us about all the other stuff that we are overlooking: hidden species, unknown ecological relationships, critical thresholds we shouldn't cross?"

Source: The Verge



Courtesy of Irm Laman via Wikimedia Creative Commons

Recently, scientists discovered a new species of orangutan, now called Pongo tapanuliensis. This species is critically endangered and only 800 such animals exist in the world at the moment.

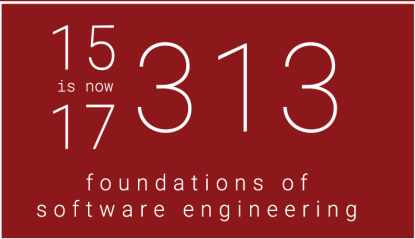


only the numbers are changing

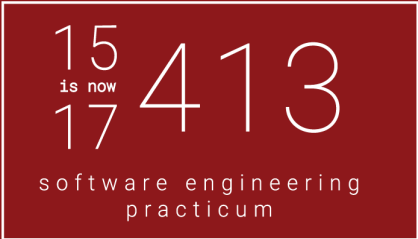


principles of software construction

15-214 Principles of Software Construction is getting a new course prefix Spring 2018: 17-214.  
The content, instructors, and everything else will remain entirely the same.  
Several other popular courses in the School of Computer Science are also being renumbered.



foundations of  
software engineering



software engineering  
practicum



web app  
development



special topics:  
program analysis



CWRU will fall to Tartans

Astros earn needed victory

CMU FOOTBALL, from A10

A win against Case Western would likely qualify the Tartans for a bowl game: an out of conference game at a neutral site. This would allow the team to

play another game and get yet another win under their belt. Regardless of the long-term benefits, beating Case Western is their focus, as pride in the rivalry would demand no less.

“The preparation will

be there. The enthusiasm will be there. The excitement will be there. It’s just a question of discipline and turnovers and efficiency. The team that outplays the other will win the game,” said Lackner.

WORLD SERIES, from A10

The publication had proclaimed that Houston would win the one year that their city needed it the most, and boy did the Astros need it most this year.

Nine weeks after Hurricane Harvey swept through Houston, devastating everything from the streets to the people’s homes, the Astros have given the people something to cheer about, a welcome

distraction from the trials of reality. This World Series and the Astros’ win are things that everyone, from Dodgers faithful to clueless fair-weather fans, can enjoy. This is what sports are all about.

SPORTS BRIEFS

Volleyball

The ninth-ranked Carnegie Mellon volleyball team topped Brandeis University 3–2 in the opening round of the University Athletic Association (UAA) Championship on Friday afternoon. The Tartans started as the number one seed for the tournament which was hosted by Emory University.

The Tartans (28–3) fell behind a set when the Judges (15–12) won set one by a 25–21 score. In a back-and-forth second set, the Tartans prevailed 30–28 after three straight kills to end the match, with the first two coming from sophomore Sahara Aqui and the set winner off the hands of junior Lauren Mueller, who had five kills in the set.

The Tartans jumped out to a 10–4 lead in the third set before extending the lead to 16–8. First-year Julia Kim served three straight points, starting with an ace, to give the Tartans their largest advantage of the set. The Tartans would later lead by eight three more times before the final set score of 25–17 was in their favor.

After the Tartans fell 26–24 in set four, they moved a 6–6 score in the fifth set to a 9–6 advantage before winning 15–8, with the final three points earned on kills by senior Eliza Donohue, sophomore Maia So-Holloway, and Donohue with the match point.

The Tartans hit their best in the fifth set with 11 kills and zero errors on 25 attempts. Mueller finished with a match-high of 20 kills, as Donohue and junior Sarah Jurgens each tallied 14. Donohue finished the match with zero errors and a hitting percentage of .438. So-Holloway put down six kills on 12 attempts with zero errors along with 48 assists and 24 digs for the match.

Sophomore Kayla Yew collected a career-best of 41 digs with seven assists while Aqui led with five block assists.

The Tartans then faced seventh-ranked Emory University in the semifinals on the same day. The Eagles pulled out a 3–2 victory, knocking the Tartans’ record to 28–4 for the year.

The Tartans pressured the Eagles into 30 attack errors for the match but only two came in the deciding fifth set when the Eagles hit a match-high .269 and won 15–12.

Emory won the first set 25–18 before a battle for the second set went to the Tartans, 29–27. Emory then took a 2–1 lead with a 25–23 win in set three before the Tartans answered with a 25–23 win in set four.

Mueller led the team with 18 kills while Hurgens had 17 kills and Donohue had 12 kills. Donohue led the Tartans, who had 18 block assists, with five block assists as Mueller and Aqui each tallied four block assists.

So-Holloway collected 37 assists and 27 digs while Yew had 40 digs.

On Saturday, the Tartans defeated no. 20 University of Chicago in the third-place match 3–1. With the win, the Tartans improve to 29–4 overall while the Maroons are now 23–8.

Carnegie Mellon won the first two sets by the scores of 25–22 and 26–24 before Chicago took set three 25–15. In the fourth set, in which the Tartans won 25–16, the score was tied at 9–9 before Carnegie Mellon took eight of the next nine points to grab a 17–10 lead and went on for the nine-point victory. During the stretch, So-Holloway recorded three of her four service aces.

The Tartans had two players with double-digit kills, as Jurgens and Mueller each tabbed 14. Jurgens hit .353 while Mueller hit .250. So-Holloway and senior Amanda Thiele totaled 38 of the Tartans’ 48 assists. So-Holloway handed out 22 and Thiele 16.

Yew continued her double-digit dig streak with 17 digs, and her streak is

now at 39 dating back to last season. Mueller recorded 13 digs in the win. At the net, Jurgens and Aqui each had three block assists while Donohue tabbed two block solos and two block assists.

The Tartans finished the regular season tied with the most wins, 29, under 13-year head coach Kim Kelly and will wait to see if they receive an at-large bid to the NCAA tournament on Monday, Nov. 6. The selection show will be at 12:30 p.m.

Men’s Soccer

The Carnegie Mellon men’s soccer team closed the regular season on the road at Case Western Reserve University Saturday evening. Despite scoring first for the 14th time this season, the Tartans fell 2–1 to the Spartans in UAA action. The Tartans close at 10–4–3 and 2–3–2 in the UAA while the Spartans finish the year at 7–9–2 and 3–4.

Sophomore Elliot Cohen put the Tartans ahead in the 16th minute when his shot from nearly 20 yards out hit the back of the net. Senior Ryan Stinebaugh earned the assist after crossing the ball from the right side across the pitch.

Case Western Reserve put in the equalizer in the 76th minute off a goal from inside the 18-yard box.

Less than five minutes later, another Spartan scored off a free kick from 25 yards out to give the home team the lead in the 81st minute.

Late in the 82nd minute, junior Zack Masciopinto put a shot on frame that the goalkeeper stopped. Boyle later stopped a shot by junior Anthony Gulli with two minutes and 15 seconds remaining in the game.

Gulli’s shot was the last of the game and the Spartans held on for the home win.

Women’s Soccer

Two goals by senior Sienna Stritter led the ninth-ranked Carnegie Mellon

University women’s soccer team to a 3–1 victory at Case Western Reserve University on Saturday evening. The Tartans finished the regular season with a 13–2–2 mark and 5–1–1 UAA record while the Spartans finish the year at 7–11 and 1–6.

Stritter put in the game’s first goal when her corner kick in the 27th minute curved over the keeper and in the far corner netting for her second score of the year.

Two minutes and 20 seconds later, sophomore Emery Noll sent a free kick from 25 yards out on the left side of the field to the far post. Her service sailed over the keeper, grazed the crossbar and bounced across the goal line for her first tally of the season.

Stritter’s second goal of the game came in the 34th minute when she struck a shot from 26 yards in the center of the field to the upper left corner. First-year Ashley Akin assisted on the play with a pass back to Stritter for the shot.

The Spartans broke up the shutout on a penalty kick in the 77th minute.

The Tartans finished the season third in the UAA and ranked first in the Great Lakes region. The Tartans will now wait to see if they receive an at-large bid to the NCAA tournament when the selection committee announces the bracket on Monday, Nov. 6 at 1 p.m.

Women’s Swimming & Diving

The Carnegie Mellon women’s swimming and diving team hosted Division II Clarion University on Saturday, Nov. 4 and won the dual meet 212–88 after winning 12 events and sweeping six.

First-year Stefanie McMillan touched first in the 1,000-yard freestyle in a time of 10:47.17 which was five seconds faster than her previous best time for the season.

The first-year also bettered her time in the 500-

yard freestyle when she won the event in 5:17.89.

Sophomore Emma Nicklas-Morris led a sweep of the 200-yard freestyle by finishing in 1:57.21 while first-year Jessica Chau bettered her previous best time in the 100-yard backstroke when she won the event in 59.06.

Senior Kim Hochstedler led a sweep of the 100-yard breaststroke in 1:07.29 with junior Cassidy Smith touching in 1:08.55 and first-year Eliza Bell touching in 1:08.87. Hochstedler also led a sweep of the 200-yard breaststroke with a time of 2:24.17.

First-year Jessica Li was also a double winner for the day when she won the 200-yard butterfly in 2:07.70 and the 100-yard freestyle, which the Tartans swept, in 53.17.

Sophomore Teagan Goforth won the 200-yard backstroke, more than two seconds faster than the second-place finisher in 2:09.74.

First-year Sophy Peng touched first in the 100-yard butterfly in 1:00.05 with senior Mary St. John touching second in 1:00.29 and senior Anna Wong finishing third in 1:00.46.

In diving, first-year Maddie Mianzo was the top Tartan on both the 1-meter and 3-meter boards, placing fourth with 186.83 points on the 1-meter and fifth on the 3-meter with 180.75 points.

The Tartans will next compete against Grove City College and Washington and Lee University on Saturday, Nov. 11 at home. The meet is set to begin at 11:30 a.m.

Men’s Swimming & Diving

The Carnegie Mellon men’s swimming and diving team hosted Division II Clarion University on Saturday, Nov. 4 and won the dual meet 218–83 after winning 12 events and sweeping two.

The Tartans opened the meet with a victory in the 200-yard medley

relay with first-year Justin Britton, junior Winston Chu, first-year Max Gonzalez, and sophomore Richard Deng finishing the relay in 1:35.02.

Sophomore Sam Hawke was victorious in the 200-yard freestyle in a time of 1:46.90 while Britton followed with a win in the 100-yard backstroke in 52.97. Hawke won his second event of the day when he touched first in the 100-yard freestyle in 48.09.

Chu won the 100-yard breaststroke in 57.02 and the 200-yard breaststroke in 2:10.31. Senior Matthew Chu was second in the 100-yard breaststroke in 58.88.

Gonzalez led a sweep of the 200-yard butterfly when he finished in 2:01.97. First-year Emmanuel Eppinger was second in 2:03.01 with first-year Bradley Chen touching third in 2:05.08.

Deng won the 50-yard freestyle in 21.51 with sophomore Ryan Fitzpatrick finishing second in 22.15.

First-year Andrew Joyner won the 500-yard freestyle in 4:52.05 with sophomore Rip Lyster touching second in 4:53.49. First-year Thomas Delauro knocked more than two seconds off his previous top time with a third-place finish in 4:55.95.

First-year Tyler Duic recorded a new season best when he won the 100-yard butterfly in 54.00 and the 200-yard freestyle relay team of Britton, Deng, first-year Lukas Marxer, and Hawke closed the meet with a top finish in 1:26.39.

In diving, junior Gabe Bamforth led the Tartans with a first-place showing on the 3-meter with 300.00 points and a second-place showing on the 1-meter with 275.48 points.

The Tartans will next compete on Saturday, Nov. 11 at home against Grove City College and Washington and Lee University. The meet is set to begin at 11:30 a.m.

Compiled by  
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# Sports

## Case Western’s weapons will destroy Tartan hopes

## Tartans will commemorate 50th Anniversary with win

**EDDIE KEREKES**  
*Special to The Tartan*

On Nov. 11 two rivals will do battle in Pittsburgh as Case Western Reserve University (CWRU) and Carnegie Mellon University football teams will play in the 32nd annual Academic Bowl. Though the classic rivalry means quite a bit to both teams, the result will have extra implications for the Spartans as they are looking to return to the NCAA playoffs for the first time since 2009.

CWRU opened the season with eight straight victories and have dominated opponents, winning each game by an average of 28.5 points. Though CMU will be just the second team the Spartans play with a winning record this season, CWRU will still come out on top and bring the Academic Bowl back to Cleveland after losing the previous two seasons.

Leading the Spartans’ offensive attack are a pair of fourth-year players who are at their peaks.

Running back Jacob Burke averages over 100 yards per game and has totaled 16 touchdowns on the ground this season. Gaining an average of five yards per carrying, the bruising back is difficult for any defender to bring down.

Dual-threat quarterback Rob Cuda is behind center for his third and possibly best year as the starter. He has his highest completion percentage (61.8 percent), second most yards per game

(259.9) and a 26 to five touchdown to interception ratio. Eleven different receivers have caught a touchdown pass this season, so it’s not as simple as taking away Cuda’s primary weapon. And while Cuda hasn’t carried the ball a lot this season — just 71 rushing attempts in nine games — he possesses the ability to take off and run on any play.

CMU will have to choose which one of the two play-makers to stop. And even if they can take away a Spartans’ weapon, CWRU’s other top performer will just step in and carry the load.

On the other side, the strength of the CMU offense used to be, and probably still is, fourth-year running back Sam Bengier. He has totaled 58 rushing touchdowns and over 5,000 rushing yards in his historic career as a Tartan. However, this season, opposing defenses have been able to shut him down. Just two times this season has Bengier eclipsed 100 yards on the ground.

It doesn’t get any easier for him as the Spartans defense is one of the best in the country at stopping the run. The team ranks 37th in Division III with just 99.8 yards allowed per

game on the ground. This includes holding Geneva College running back Trewon Marshall, who has the fourth-most rushing yards in Division III, to just 56 yards on the ground. The whole unit is playing at its peak right now, forcing 11 turnovers in the past two games.

For CWRU the matchup against the Tartans is a perfect revenge game. CMU ruined the team’s perfect season and the chance at making the playoffs last season. The team would want nothing more than to beat the Tartans to finish the job this year.

If there’s one factor that will push the Spartans over the top, it’s their desire for revenge over an archrival, especially one that has already denied the team the Academic Bowl for two straight years. CWRU wins this game.



Paola Mathus/Art Editor

**KATE LISTON**  
*Staffwriter*

“We treat every game like it’s the biggest game of the season,” said senior inside linebacker, mechanical engineering major, and co-captain Stanley Bikulege.

As the Carnegie Mellon football team prepares for their last game of the season against Case Western Reserve University, they made no change in routine. Although it would be expected that the decade-long rivalry between the two schools for both football and academics would strike a bit of intimidation into the hearts of the Tartans, the team believed the game was on par with any other.

“We really do the same thing week in and week out. There’s an old expression about having faceless opponents and despite the fact that this is a team that

we’re rivals with and although it would seem externally that this would carry extra weight, we’re [going to] go about our preparation the same way,” said senior running back, business administration major, and co-captain Sam Bengier.

Despite the team’s attempt to treat it as just another game, the game does hold more weight than usual. It will not only be the team’s last game of the regular season, but it could be their eighth win, a mark the Tartans have not accomplished since 2006.

“The fact that we haven’t won eight games during the regular season since 2006 [is significant]. You know, you’re always looking for motivation and reasons to win and that’s certainly a good reason to win this game. To have a winning percentage of 80 percent [is] something to strive for and just another reason to put forth our best effort,” said head coach Rich Lackner.

The game will have effects in both the Presidents’ Athletic Conference (PAC) and the University Athletic Association (UAA). In the PAC, Case Western currently ties with Washington & Jefferson for the lead while in the UAA, the game’s winner will take the title.

Among the many talented athletes who might make the difference for the Tartans, Bengier stands as the most imposing figure for opposing defenses to face. Bengier is the program’s all-time leading rusher, as he has run for 5,197 yards in 41 career games. Bengier currently leads the team in rushing and ranks fifth in the PAC and tops the UAA with 864 yards on 140 carries for an average of 6.2 yards per touch. He has rushed for 58 touchdowns and has six receiving scores for 64 touchdowns in his career. Bengier needs one more rushing score to become the school’s all-time leader. His yardage, along with his 58 rushing touchdowns and 865 carries, rank third on the PAC all-time list.

The game, which is to take place on Saturday, Nov. 11th at 2 p.m., will not only be played on the Tartans’ home turf, but is also the 32nd annual Academic Bowl and takes place during homecoming week and the 50th Anniversary. This, along with the fact that the preceding weekend did not have a game and allowed players to rest, gives the team an advantage.

“I don’t know if I’d call it a pressure but [instead] a better atmosphere; it gets more people here, it makes the game more exciting for us to play in. And having this week off really gets guys ready to get on the field again,” said Bikulege.

See **CMU FOOTBALL**, A9

## Houston Astros win World Series, earn first ever title

**MARIKA YANG**  
*Assistant Sports Editor*

It’s Game 7 of the World Series, the bottom of the ninth with two outs. The batter swings on the first pitch of the count, a ground-ball to the right. With an easy pass to first base to get the out, the Houston Astros beat the Los Angeles Dodgers and are World Champions for the first time in their 56-year history.

The Fall Classic started slowly and quickly at the same time, a warmup, a tease to what was to come. A four-run doozy, Game 1 lasted only two hours and 28 minutes, one of the shortest World Series games ever. Game 2, at the time, seemed like the pinnacle of what a championships series between the two best teams in Major League Baseball (MLB) could be. The 11-inning contest boasted eight home runs from eight different players, four from each team. Games 3 and 4 evened the series at two games apiece and continued both teams’ great hitting.

But Game 5 was the game that captivated the world, the game that told people who didn’t even watch baseball that they

should be watching baseball. A 25-run, home run extravaganza spanning 10 innings, Game 5 extended the excitement of Game 2. There were three three-run homers in two innings, and by the later innings, there was a constant feeling of “How can it get any better than this?” The game has been cited in the conversation of juiced balls and is already considered one of the best World Series games ever. After the insanity of Game 5, Game 6 brought the series back to earth, another four-run game to the Dodgers.

With all the twists and turns of the series, the errors and home runs, the wild pitches and endless calling to the bullpen, the relative mundaneness of Game 7 should have been just what we expected, because of its unpredictability. After late-inning game-tying runs and the loud whacks of the bat, it seems fitting that baseball’s best offense got all five of its game-winning runs in the first two innings.

For the Astros, everyone, from the team’s stars to the underrated signees, had their chance to help the team. World Series MVP George Springer opened the game with a double and capped off an amazing series with his fifth homer of the series. The American League batting leader and probable MVP José Altuve drove in a run off a groundout. But in the end, for a team with two Cy Young Award pitchers, Dallas Keuchel and Justin Verlander, the winning pitcher was the journeyman and oft-injured Charlie Morton, whose signing after last season raised some

eyebrows. In his first relief pitching since 2008, Morton smothered the Dodgers offense for the final four innings in the biggest game of his career.

For the Dodgers, starting pitcher Yu Darvish laid his second egg of the series, not lasting the second inning and giving up all five of the Astros’ runs. Ace Clayton Kershaw pitched for the last time in a Cy Young Award-worthy year for four scoreless innings in relief. The only candidate for NL Rookie of the Year, Cody Bellinger, who hit 39 home runs during the season, set the single postseason record for strikeouts with 29, 17 in the World Series, another record.

The Dodgers had many chances to climb out of the five-run hole they fell into in the second inning but left ten players on base. Nevertheless, the series should be less about how the Dodgers lost and more about how the Astros won. The teams could not be more different. The Dodgers, with the highest payroll in the MLB, have a storied history with franchise Hall of Famers and multiple championships and won their division this year for the fifth straight time. In the last five years, the Astros have rocketed from the absolute bottom of the league to the top, winning only their second pennant, and their first championship.

As Morton retired the final three batters in the ninth inning, it almost seemed like destiny that the Astros would fulfill that crazy *Sports Illustrated* prediction from 2014.

See **WORLD SERIES**, A9

## Pittsburgh Pirates decide on player contract options

**BRAD PUSKAR**  
*Junior Staffwriter*

With the Pittsburgh Pirates recently announcing that they picked up outfielder Andrew McCutchen’s 2018 option and declined pitcher Wade LeBlanc’s and catcher Chris Stewart’s options, many people have begun speculating what the Bucs plan to accomplish in the offseason. Let’s break it down position by position.

Pirates pitching was up and down in the 2017 season, but it never seemed to be a consistent problem. The Bucs have a number of young, up-and-coming pitchers like Trevor Williams, Steven Brault, Jameson Taillon, Chad Kuhl, and, if he can prove himself, Tyler Glasnow.

It’s likely that the Pirates will try and save money by sticking with their homegrown group, but it’s not outside the realm of possibility that they make a move for a veteran pitcher like Michael Pineda. Pineda is coming off Tommy John surgery, so he may not be ready to throw in time for spring training, which may give Glasnow another chance to prove that he’s ready to throw in the major leagues.

Stewart’s option being declined leaves the job of catching up to Francisco Cervelli and Elias Diaz. With Cervelli’s constant injuries, Diaz saw a fair amount of playing time last season. Hopefully, the pair will split duties behind the dish more evenly, so as to relieve some of the strain on Cervelli.

The infield seems to be mostly locked down, with Josh Bell set to start at first

base, putting an end to a streak of one-season starters at that position that stretched back to 2009. Josh Harrison and Jordy Mercer seem set to hold down the middle infield. The Pirates only big question mark sits at third base.

The Pirates have been holding on to hope for the return of Jung-Ho Kang, who didn’t play in the 2017 season after being unable to secure a work visa in the US. David Freese, nominated for a Gold Glove at the hot corner, isn’t a bad replacement, but at 34, Freese just can’t thrive as an everyday player. The Pirates need a power-hitting third baseman to take the weight off Freese’s shoulders and get some power back into the otherwise weak hitting lineup.

One great grab would be Mike Moustakas. He’s coming off of a 38-home run season with the Royals, so he’d fit right in to complement the power of Bell and McCutchen. Moustakas is,

however, slated to make a bit more than what the Pirates have ever offered, so it’s unrealistic that the Bucs grab him. Someone a little cheaper would be Todd Frazier. He’s got a solid glove and hit 27 home runs last year.

The Pirates’ outfield seems to be locked and loaded as well, as long as McCutchen doesn’t get traded. The starting three have good support from the bench in players like Jordan Luplow, Sean Rodriguez, and Adam Frazier.

Some bullpen help will definitely be needed. Homegrown players like Edgar Santana and Dovydas Neverauskas seem to have more than earned their spots into the pen after performances last year, but the Bucs need more depth than what they have now. Pat Neshek is up for free agency this year and could serve as a solid setup man for Felipe Rivero. Jake McGee, a lefty, could be another decent option to help out.



Courtesy of Keith Allison via Flickr Wikimedia Commons

Outfielder Andrew McCutchen will continue playing for the Pirates.



Courtesy of Trlikly via Wikimedia Commons

The Astros are the champions.



# pillbox

The Tartan's Art & Culture Magazine

11.06.17 • B4 Chick'n Bubbly • B6 AcaPittsburgh • B8 Thor



table of contents

4

Chick’n Bubbly

6

AcaPittsburgh

8

Thor: Ragnarok

3

Advice for Awkward People: On failing not making you a failure

3

Bar Buddies: Fuel and Fuddle

5

*The Queen of Versailles*

10

Take Ten: Carnegie Mellon Nightscapes

11

Puzzles: Your weekly mental warm up

12

Comics: research risks, quicksand, and time not flying

14

Horoscopes: Signs when winter is coming

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# Advice for Awkward People

Ruth Scherr | Copy Manager

On failing not making you a failure

Hey Ruth,  
So, the inevitable happened. I'm officially pretty sure that I'm going to fail a class, and I have no clue what to do about it. It isn't one of my core degree classes, but I was planning on using it as one of the electives that I need to graduate and I don't want to have to re-take it.

Theoretically, I could still do reasonably well – but I'd need to get 100 percent on all the projects and exams left. I'm not even going to pretend that's possible. If it was I wouldn't be in this position in the first place!

I'm obviously bummed because this was absolutely nowhere in my plan, but I'm also kind of... ashamed? I was a great student all through high school and I didn't come to Carnegie Mellon expecting it to be easy, but I still thought I'd be smart enough to pass all my classes. What do I even do about this?

Help,  
F\*\*\* All, I'm Losing It, Not Good

Dear FAILING,  
Since this won't be published until the drop date, let's assume that you haven't and won't be able to drop the class. Maybe you're a senior with no time to re-take it, maybe you thought everything

was going well until you bombed a big test too close to properly consider dropping, or maybe you can't drop without unexpectedly going part-time. The good news is that there are definitely still options available to you.

I'm also going to presume that you've been going to as many lectures and recitations as you can and have been doing all the work. If you haven't... maybe consider that as a reason for why you aren't doing that well? If for some reason you are incapable of engaging with the class on the level expected of you, go talk to the Office of Disability Resources as soon as you can. They might not be able to do much for you this late in the semester, but you've likely got at least one semester left, so it'd be a good idea to familiarize yourself.

Now that you've done all that – go talk to your professor. There is literally no downside. (Well, okay, you'll have to work up the courage to do so, but I believe in you.) The worst thing that happens is that they can't change anything and you're in the same situation as before. The best thing that happens is that they offer you an extra credit assignment to bump you back up into passing territory. You won't know until you give it a try.

At the same time, you should probably have a

chat with your academic advisor so the two of you can talk through your options. As great as my advice is, counseling students through this kind of thing is their actual job, so they're likely to be much more useful.

If worst comes to worst and you're still in and failing this class by the last week of classes you should seriously consider withdrawing. I know you don't want to re-take the class, but if you fail you're going to have to anyways, and a "W" looks a lot better on a transcript than a straight up fail. There's a reason the withdraw option exists, and it's because people use it. Taking a "W" is not a mark of shame.

Speaking of – there's nothing shameful about not doing well in a class. I know it's hard to believe, and I'd be lying if I said I was 100 percent okay with failing myself, but it doesn't make you a disgrace. Sometimes life gets in the way, or you have difficulty following lecture, or you simply don't get the material. It doesn't make you any less worthwhile. You're still a person who contributes to the world. Who cares if you had a rough patch or made a mistake? So has everyone else.

You can do this,  
Ruth

# Bar Buddies: Fuel and Fuddle

Apeksha Atal | Pillbox Editor

Kicking off the Christmas season

I've never been a huge fan of beer, but I'm friends with a lot of people that are. It's one of those drinks that you sort of have to grow into and understand the nuances of to truly appreciate. I remember going to the Heineken factory in Amsterdam, years ago, but because I was underaged I spent the whole time largely disconnected from what was happening and drinking Coca-Cola. Now that I'm of age, I'm more than open to having a life-changing beer experience, and last Wednesday night came close.

A friend of mine is a huge fan of Great Lakes Brewing Company, a Cleveland-based establishment that releases a delightful Christmas Ale during the Holiday season. Naturally, the day after Halloween was when it was released at Fuel and Fuddle this year, and the lot of us flocked on over for late night ale and warm, half-priced food.

**The location:** For those who haven't heard of this glorious establishment, Fuel and Fuddle is

located in Oakland, just off of Forbes Ave, and usually has people lined up outside, hungry to go in. It's a walkable distance from campus and right in the center of what I can only think to call the "Oakland nightlife scene." Take any of the 61s from campus if you're feeling a little lazy.

**The drinks:** Admittedly, this was actually my first time drinking at Fuel, and I pretty much just drank the ale, but I will say that it was more delightful than anticipated. It was a little hoppy, but it also had some essence of the holiday spirit that I'm still having trouble describing. It didn't taste bad after I'd eaten some food, and it didn't taste bad when I drank it alone. Maybe it was something about being with friends. Maybe it was the magic of being almost two months before Christmas.

**The vibe:** Fuel is always lovely. The menu is full of items to satisfy your cravings, from the "Smashed Potato Pizza" to the baked brie. Fuel also boasts a couple screens, so if you're interested in catching

a game, this is a great place to hang out. There's plenty of room to sit down and the reddish-yellow glow that fills the room brings in a sense of warmth that is even more desirable in the fall and winter time.

Going as a group is ideal because you can maximize the assortment of food and drink you have to sample. I shared food with a friend, clinked glasses, and had more than enough laughs to leave my belly hurting.

**Lit or Nah:** You can go pretty late, enjoy a drink or food, and get those warm fuzzies that everyone needs every now and then. For these reasons, I'm going to go with Lit. Fuel and Fuddle has become synonymous with "late night" and my go-to response to any "I'm hungry"s past 11 p.m. I'd recommend trying the ale while they still have it and grabbing some grub with someone you need to catch up with. Trust me, your tummy will thank you.



# Chick'n Bubbly

A comforting taste of home in Oakland

The last time I remember having real fried chicken was one night back in August when my mom made some for dinner. I've always loved my mom's fried chicken, and what I love most about it is the bread crumb coating on the outside. She seasons the bread crumb mixture to perfection before frying, and the result is a delicious and extra crispy crust on the chicken. I've always felt that no other version of fried chicken can compare to my mom's, so I've never even bothered to buy fried chicken during my time in college. It wasn't until my friend brought me to Chick'n Bubbly that I began to reconsider my decisions.

Chick'n Bubbly is a small eatery in Oakland that is known for its Korean-styled fried chicken and bubble tea. Customers are able to buy a combination of drumsticks and wings in snack, small, medium, and large sizes. All chicken is served with a choice of sauce: sweet and spicy sauce, soy garlic sauce, or spicy soy garlic sauce. What's more, Chick'n Bubbly even offers gloves for eating their chicken, since it can get messy very easily.

When I went to Chick'n Bubbly for the first time a few days ago, I was surprised to see how small the place was. The small space did seem to create a very comfortably social environment, where even employees were having casual conversations with the customers. I admired the urban setup of the restaurant, along with its social atmosphere, and I knew I wanted to come back another time to hang out with more of my friends.

Both of our orders of chicken came after about fifteen minutes. We got a medium sized box of chicken with half covered in sweet and spicy sauce, and the other half covered in soy garlic sauce. Although the price of the meal was a bit expensive, the food was definitely worth it. Eating did get very messy pretty quickly, but at least the gloves were helpful for keeping my hands clean. The thick coating of the sauces (which got all over my face) added lots of flavor and spice to the whole eating experience: the sweet and spicy sauce provided a good combination of flavoring. The sweet taste did overpower the spice at first, however at the end the spiciness kicked in, leaving a bit of a burning sensation on my lips. The soy garlic sauce was also a little sweet, but the garlic flavor complemented it well. The combination of all these flavors, the texture of the sesame seeds sprinkled on top of the chicken, and the delicious crunchiness of the outer crust made the entire food experience amazing.

The chicken at Chick'n Bubbly is definitely unlike any other version of fried chicken I've eaten, although it still doesn't compare to my mom's recipe (but it's close, not going to lie). The food there is fun to eat and surely tasty, just don't forget to wear the gloves. If you're thinking about sharing some fried chicken with a couple of friends in the near future, be sure to check out Chick'n Bubbly!

Michelle Madlansacay | Staffwriter  
art by Paola Mathus | Art Editor



# Queen of Versailles

Gowri Sunder | Staffwriter

art by Theodore Teichman | Visual Editor

## The siege of a one percenter's empire

*The Queen of Versailles*, directed by documentary photographer Lauren Greenfield, was not what I expected. Lauren Greenfield may be more publicly known from her commercial work, the “#LikeAGirl” ads for the feminine hygiene brand Always. Her personal projects include a photo book at an inpatient center for eating disorders, a series on money and youth in L.A., and photo series about girls in culture.

*The Queen of Versailles* is a documentary about American wealth. It set out to follow the family of David Siegel, the CEO of Westgate Resorts, as they began to build themselves a literal American palace, modeled after Versailles. But their \$100 million dream home was not yet finished when the 2008 market crash hit — and the film follows Jackie and David’s Siegel’s life from then on.

The beginning of the movie, where David Siegel holds Miss America parties and flirts with 20-year-old contestants, and Jackie lives the life of a wealthy socialite, sets up an expectation for something much more shallow. Donald Trump, jarringly, pops up several times in relation to the family. Siegel is shown photographed with the Bushes and conservative elites. What I expected was an hour and a half on a family who lived in their shallow, white conservative bubble of outrageous wealth and spending.

What Greenfield crafted, however, was a beautiful and vulnerable parallel of this family’s troubles and relationships with a universal story of financial security in America. Jackie talks also about how she and her husband had eight kids and established a lavish lifestyle because they expected security of income. The slow chaos and decay of families’ expected quality of life work as an observation of our current conception of the American dream.

With interviews of their nannies who struggle to support families on work visas and Jackie’s friends from her small hometown, Greenfield is able to paint a picture of a community of people at different levels of society just trying to make it in the world. David Siegel talks about how the

be able to give your kids a better life than what you have. It’s clear in his apparent inability to be happy with his family, buried in documents trying to find money to save what he built, that the film is about how all of these families struggles so hard to keep that dream alive once the financial crisis hit.

Since the movie’s release in 2012, a lot has changed. Presumably, Greenfield’s references to Donald Trump and his golden tower were not made with prescient knowledge of his presidency, but *The Queen of Versailles* is an important film to look back on to understand how we have gotten to where we are.

Greenfield, in these complicated vignettes of life, has created a portrait of a family that we can see ourselves in. Siegel’s efforts to focus on their family and relearn the things that matter, even as David Siegel prepares to push towards bankruptcy to save his company and his palace, is what makes this film so engaging and tragic. I left with great affection for Jackie, a woman who is self-made in her own right — who worked to get a degree in engineering, a modeling career, and freedom from an abusive marriage — who loves her family so much, and despite her cluelessness wants to make something meaningful and better out of her life.

Understanding the powerful and who we are taught to aspire to become — these wealthy elites — is important in also understanding our nation’s frustrations. Moreover, this film gave space to recognize how difficult it was for everyone to recover from the 2008 financial crisis. Perhaps, we have not fully honored the adversity and the resilience that followed how helpless everyone was to bankers, the economy, and stock markets, and that, perhaps, we all have more struggles in common than we think.



dream  
is to





Alexandra Yu | Staffwriter  
photos by Cindy Deng | Staff Photographer

# AcaPittsburgh

A decade of good times and good causes

This past Friday, crowds filled McConomy Auditorium for the annual AcaPittsburgh benefit concert. The charity event was started in 2008 by Counterpoint, one of Carnegie Mellon University's all-female a cappella groups, and this year the proceeds from AcaPittsburgh ticket and merchandise sales went to People to People, an organization that helps provide music education to those in developing countries.

With all eight Carnegie Mellon's a cappella groups in attendance, the auditorium quickly reached maximum capacity as everyone eagerly awaited the start of the concert. Even from the beginning, the crowd was excited for the show, cheering loudly and calling out their friends' names as Counterpoint took the stage for their first song.

After Counterpoint welcomed everyone to their show, the MC introduced Joyful Noise, Carnegie Mellon's Christian a cappella group. The lead male and female vocalist for the first song performed a heart-wrenching mash-up of A Great Big World's "Say Something" and Jason Mraz's "I Won't Give Up." I would

never have thought to pair the two songs, but the contrast between the lyrics made the already poignant songs even more emotional. Although the songs really complemented each other, the leads' voices did not. Though they were both clearly talented singers, their harmonizing fell a bit short for me. Despite this, the group continued strong with a stunningly beautiful and powerful rendition of Alicia Keys' "If I Ain't Got You" and closed with Amanda Cook's "You Don't Miss a Thing."

Next, Saans, Carnegie Mellon's all-female South Asian a cappella group, took the stage. Right from the start, Saans brought high energy and a fantastic fusion of Western and South Asian music styles, opening with Charlie Puth's "We Don't Talk Anymore." Their second performance was Justin Bieber's "As Long As You Love Me," which included incredible beatboxing and rapping throughout. After the first two fantastic performances, I didn't think the group could do any better than it already was, but their arrangement of Sia's "Cheap Thrills" was definitely thrilling. "Cheap Thrills" and "Kamli," a Hindi song from the 2013 movie *Dhoom 3*, blended surprisingly perfectly

together, and it was one of my favorite performances of AcaPitt.

After Saans came Soundbytes, and if the crowd wasn't excited enough before, Soundbytes' fans deafened with their continuous cheers. These cheers did not go unwarranted. Although I was not familiar with the first two songs they performed, Emily King's "Down" and Allen Stone's "Bed I Made," the group's sheer talent shined through and I enjoyed every moment of their time on stage. Soundbytes saved the best for last as well, as my favorite of their set had to be their final, masterful performance of Bishop Briggs' "Like a River."

The last a cappella group of the first half of the show was The Originals. Performing the second Puth song of the night, the all-male a cappella group captured the audience with "Attention." After that, they took a risk that paid off with Lorde's "Sober," expertly executing the arrangement and making the song their own. The Originals only continued to gain momentum throughout their set, awing me even more with each new performance. Their



last song, Chance the Rapper's "Same Drugs," was an especially soulful and sincere performance that blew me away.

Kicking off the second half of *AcaPittsburgh*, the Treblemakers started off with a skillful execution of Ella Eyre's "If I Go." After, the group performed one of my favorite songs, James Bay's "Hold Back the River." I may be biased, but the Treblemakers' rendition of the song was an incredible arrangement, and the vocals were just as fantastic. The Treblemakers finished with MisterWives' "Machine," continuing to exhibit their musical prowess with not only a phenomenal lead, but also formidable backup and vocal percussion performances.

Then C# took the stage with a fun mash-up of Maroon 5's "Sugar" and Katy Perry's

"Birthday." Although a bit too bubbly and sweet for my taste, the group was clearly having a good time, bringing great energy to the stage, and also to display their talents in the vocal percussion department. After a performance of "Ri But Luo" by Jolin Tsai, they closed with a great mashup of Ariana Grande songs, including "Dangerous Woman" and "Leave Me Lonely."

Second to last was Deewane, Carnegie Mellon's male South Asian a cappella group. Despite only performing two songs, Deewane did not fail to impress with their incredible fusion arrangements of South Asian music, delivering passionate performances of Sam Smith's "Lay Me Down" and Jon Bellion's "All Time Low." They knew how to leave their audience wanting more.

Last, the show returned to its host group, Counterpoint. Their performance of Ariana Grande's "Side to Side" was well done, but a bit low-energy, with the group doing not much else other than singing and swaying in place for most of the song. However, they cranked up the energy with their final song, "Everytime We Touch" by Cascada. The upbeat nature of the song did the best at showing the group's talent, especially when the beat dropped and the amazing percussion and beatbox took center stage.

Overall, *AcaPittsburgh* was a success. The audience reacted positively and excitedly to each performance, and every group displayed incredible talents in the a cappella realm while also remaining true to their unique roots and styles.







# THOR: RAGNAROK

Izzy Sio | Assistant Pillbox Editor

art by Apeksha Atal | Pillbox Editor

In Norse mythology, Ragnarok is a highly important event that essentially results in the end of the world as we know it. There are countless natural disasters, there is a huge battle that results in the death of some beloved Norse gods, and it is ultimately inevitable. However, afterward the world is born anew and recreated.

Marvel Studios' *Thor: Ragnarok*, directed by Taika Waititi, is appropriately titled because it does just that on several levels – for the character of Thor, for the Marvel Cinematic Universe (MCU), and for the audience dying of laughter, to name a few. It is probably the most fun I've had while watching a Marvel movie, and still surprisingly managed to tell a powerful story about family, identity, and one's place in the world while remaining a unique entry in the MCU, 17 movies in.

The movie lets the audience know of its expectations and lighthearted demeanor off the bat by opening with Thor, in chains, facing off against the fire demon Surtur in an exchange of witty banter, a first for the initially empty-headed God of Thunder. Letting Surtur, the catalyst of the prophesied Ragnarok, know that he couldn't care less of his ramblings on his inevitable plans for destroying the world, Thor takes his sweet time to listen to Surtur's big evil speech as the chains he dangles from cause him to rotate ever so slowly before freeing himself with the help of Mjolnir and kicking the movie off with a bang with an intense and vibrant massacre of Surtur's minions.

This opening sequence of events is a great summary of how well Waititi revitalizes the *Thor* franchise. In a film series that is known for being truly tertiary to the larger plans of the MCU, the *What We Do In The Shadows* director plants down his feet and, ironically, demands the *Thor* franchise to be taken seriously in its latest installment. Waititi truly makes the film his own through reinventing the series' genre, not holding back on the humor that he and the actors incorporate, and giving the film a carefree air amid the impending doom of the film. Waititi continues to expand a distinct and colorful style that the MCU has begun to experiment with yet still operates within what he is given to create his own color palette for *Thor: Ragnarok*, tapping into the beauty of Asgard that was previously poorly showcased in previous *Thor* installments.

Most notably, Waititi reinvents Thor as a character, with the aid of star Chris Hemsworth in one of his best performances yet. Not only is Thor an entertaining, hilarious character, but in *Thor: Ragnarok*, Hemsworth helps to flesh out Thor into a three-dimensional character and makes the God of Thunder incredibly



human. Hemsworth gives Thor's struggles a personal edge through his quest to find his own inner power, his identity, and his place among Earth and Asgard, making his journey refreshing and incredibly satisfying.

Other standout characters include Tom Hiddleston's Loki, stealing hearts with his tortured bad-boy charm since 2011, and Jeff Goldblum being Jeff Goldblum as the Grandmaster. Additionally, Hela was one of the most entertaining and terrifying villains I had seen in a movie for a long time.

Cate Blanchett incorporated the perfect balance of deadpan humor, pure fear, and raw power into her portrayal as the Goddess of Death, demanding to be noticed and known throughout all of Asgard. Often she'd help to break up huge, tense, dramatic moments with her own humor, which surprisingly suits Blanchett really well. She had no shame or moral boundaries keeping her from slaughtering an entire army of Asgard with a wicked smile on her face, which made me love her even more.

However, everything about Tessa Thompson's Valkyrie was flawless. Her introduction enraptured audiences immediately and her presence as a mighty warrior and overall bada\*\* was felt in every scene she was in. Like Hemsworth, Thompson did an amazing job of humanizing Valkyrie's struggles to the audience, fleshing her out through the entire movie and truly making Valkyrie come alive. While Valkyrie was pretty much a god, Thompson made her feel so real and organic, easily making her the breakout star of the movie.

What made *Thor: Ragnarok* an amazing cinematic experience was busting your guts out with the audience while reveling in the complex and well-executed interconnected nature of the MCU and of Waititi's direction. Not only does Waititi tie in classic Marvel moments perfectly into this story, he also pays homage to the old and new of the MCU in general. He makes it incredibly accessible for all Marvel fans, and his love of Marvel, his love of filmmaking, and his love for his movie shine as brightly and vividly as *Thor: Ragnarok*'s color scheme. While the movie is not technically perfect, it is by far the most enjoyable experience in the theater I've had this year and one I'd revisit over and over.

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# Take Ten: Carnegie Mellon Nightscapes

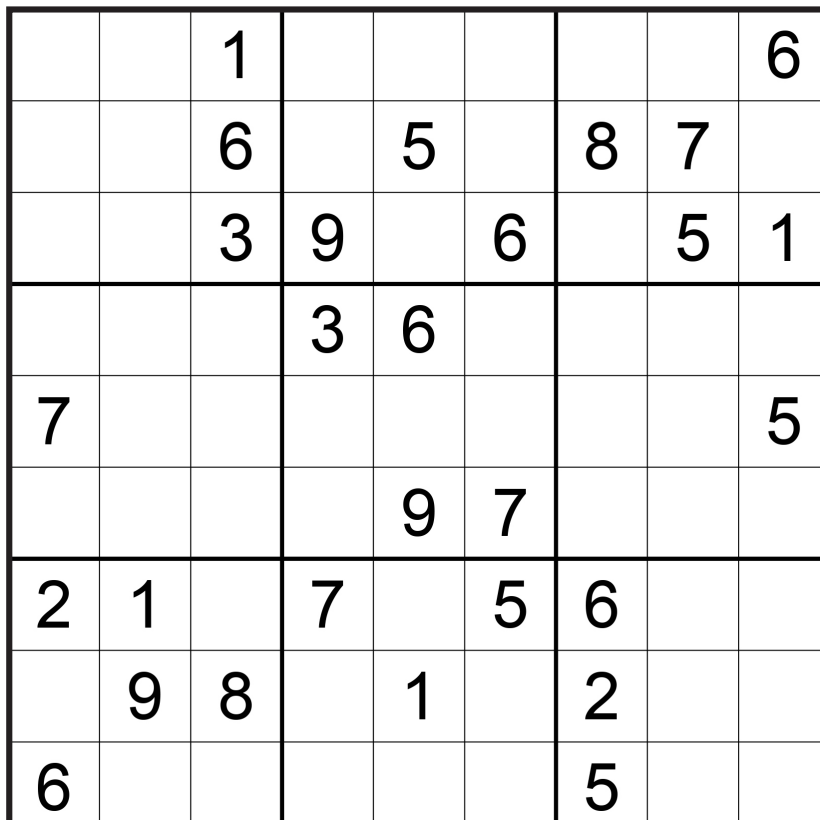
black and white film photos by **Neil Khera**

*Editor's Note: Take Ten is a series of creative work such as poems, art, photos, or flash fiction submitted by Carnegie Mellon students. To submit, email your work to [pillbox@thetartan.org](mailto:pillbox@thetartan.org).*



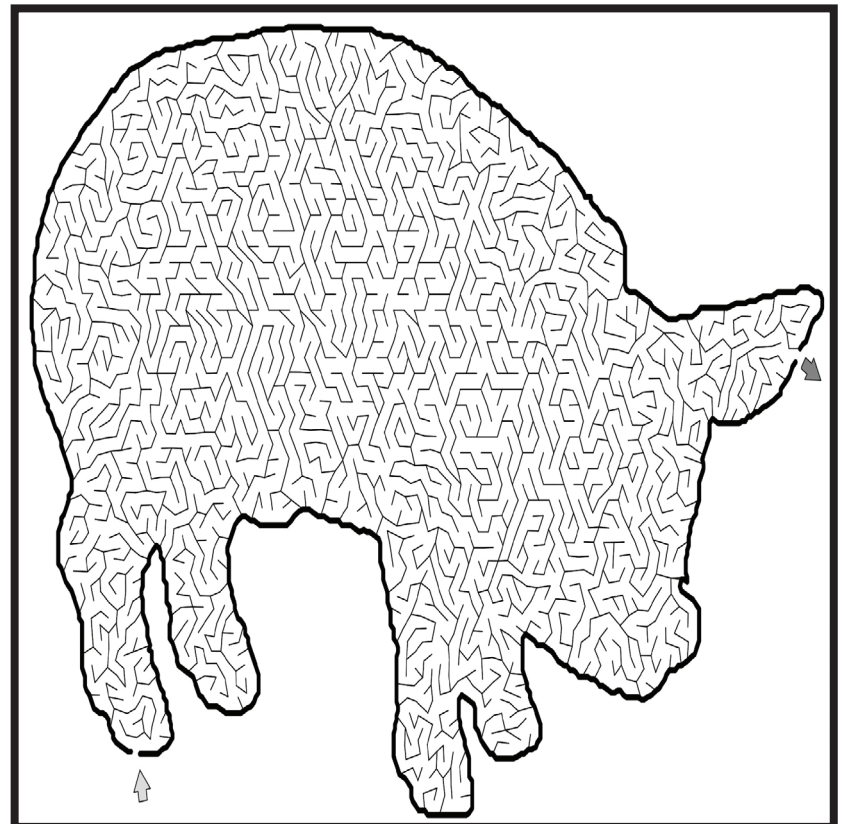


# sudoku



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

maze

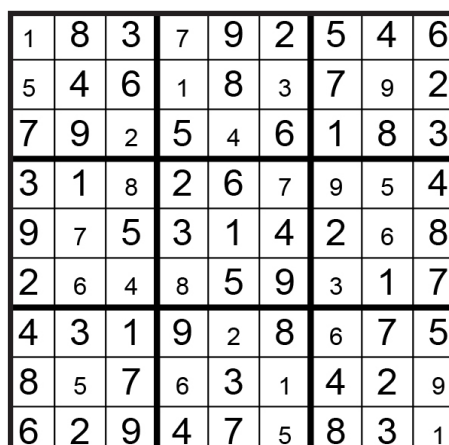


maze courtesy of [www.krazydad.com](http://www.krazydad.com)

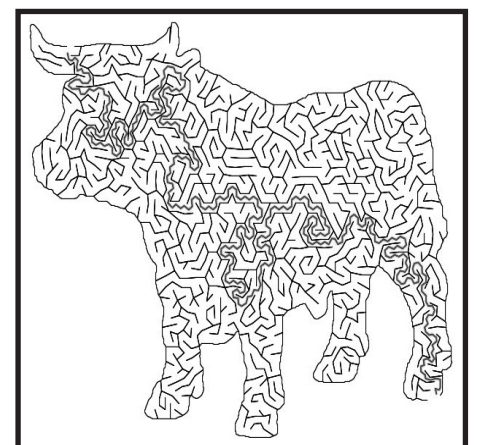
## Solutions from Oct. 30



## crossword



# sudoku

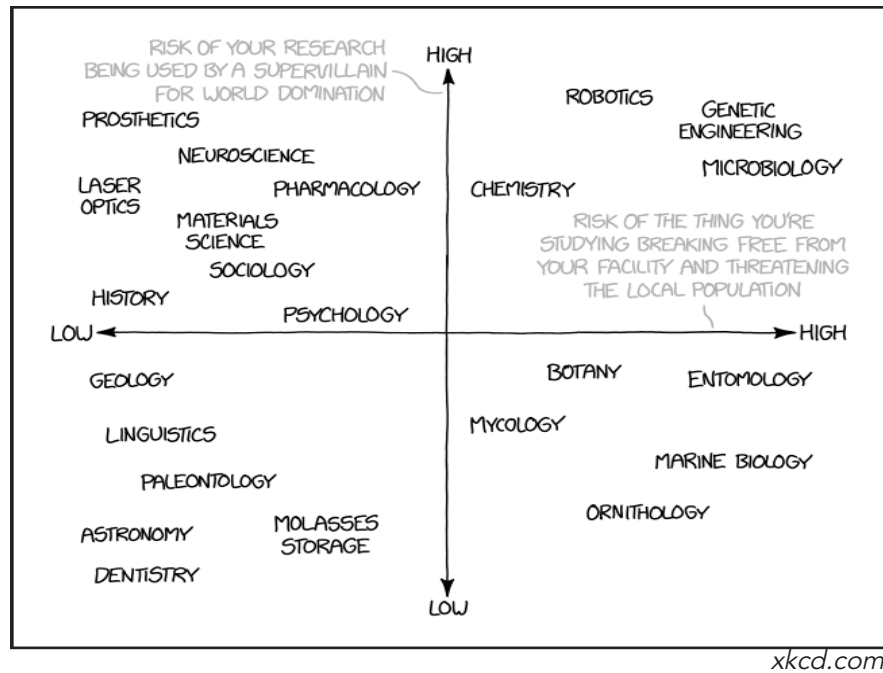


**maze**



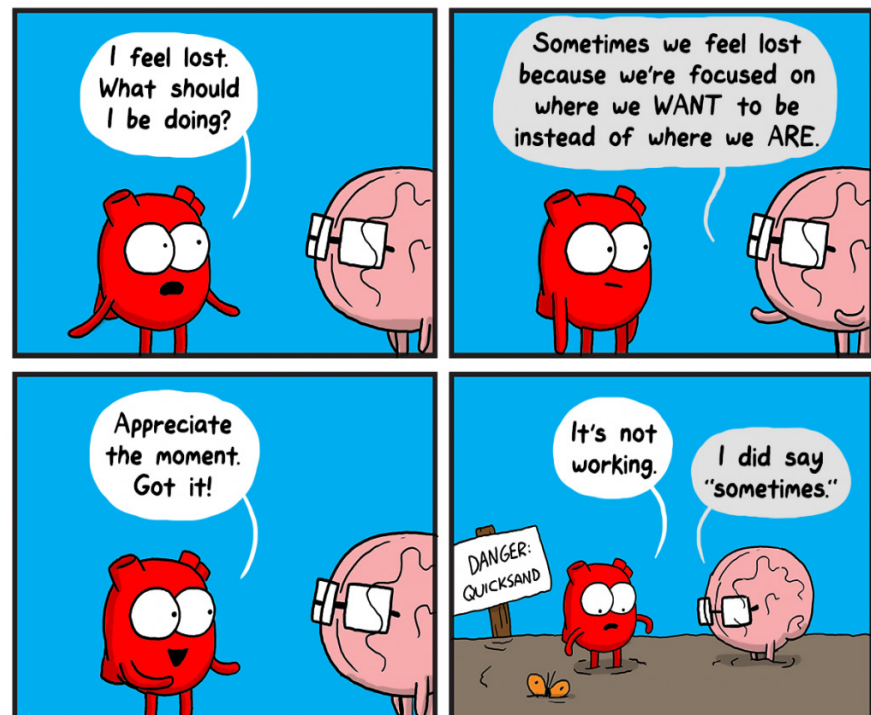
## Research Risks

by xkcd



## Quicksand

by Nick Seluk



theawkwardyeti.com

Time Offline  
by Sarah Andersen

SPENDING A DAY OFFLINE:  
2010



sarahsscribbles.com

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horoscopes: winter is coming

crossword

Aries

march 21 – april 19

Cold weather equals death.

Taurus

april 20 – may 20

Just shiver and pray.

Gemini

may 21 – june 20

The nights get longer, and your insomnia gets worse.

Cancer

june 21 – july 22

You ponder the existence of Daylight Savings Time.

Leo

july 23 – aug. 22

WINTER BREAK NEARS!

Virgo

aug. 23 – sept. 22

As winter looms, your coffee intake increases.

Libra

sept. 23 – oct. 22

You eagerly await eggnog season.

Scorpio

oct. 23 – nov. 21

The lack of leaves on the trees chills your soul.

Sagittarius

nov. 22 – dec. 21

Your winter coat increases your body width by a factor of two.

Capricorn

dec. 22 – jan. 19

ALL. OF. THE. SCARVES.

Aquarius

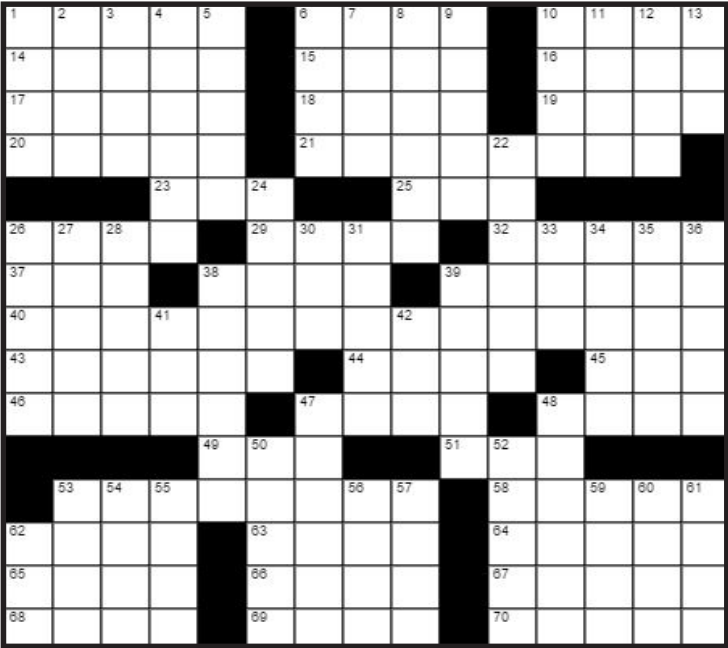
jan. 20 – feb. 18

If your gloves don't have googly eyes, are you even trying?

Pisces

feb. 19 – march 20

Double pants are the only acceptable pants.



Crossword courtesy of *FreeDailyCrosswords.com*

across

1. Betel palm
6. Unruly crowds
10. Big name in PCs
14. Counterfeit
15. Hebrew month
16. Switch ending
17. Atlanta university
18. Japan's first capital
19. Bits of thread
20. Sensation provided by buds on the tongue
21. Incessant
23. Indy 500 sponsor
25. Devoured
26. Resist openly
29. Diamond family name
32. Terra \_\_\_\_
37. "\_\_\_\_ tu" (Verdi aria)
38. Final Four org.
39. Hare hole
40. In spite of
43. Keys
44. Monogram ltr.
45. Refusals
46. Gangster Lansky
47. Grounded fleet
48. Hue
49. Tina's ex
51. As well
53. Wrist band
58. Strike \_\_\_\_
62. Chinese weight
63. 1998 Sarah McLachlan hit
64. Small tree
65. Actor Neeson
66. Legal wrong
67. "Lovergirl" singer \_\_\_\_ Marie
68. Musical ending
69. Hook's helper
70. Inexpensive cigar

down

1. Encourage in wrongdoing
2. Italia's capital
3. Freudian topics
4. Respectful bow
5. So far
6. Course list
7. Pearl Buck heroine
8. Chest of drawers
9. Slope
10. Where heroes are made
11. "\_\_\_\_ Brockovich"
12. Protracted
13. Used car locale
22. Pour from one container to another
24. Covenants
26. Strong blue cotton fabric
27. Uneven
28. Appropriately
30. Well, \_\_\_\_di.dah!
31. Watering hole
33. Old California fort
34. Singer Lopez
35. Mortise insert
36. Emo anxiety
38. Some acid
39. Belt site
41. Very early
42. Explosive stuff
47. Rarely
48. Hell
50. "Endymion" poet
52. Drying ovens
53. Scott of "Charles in Charge"
54. Went through, as the paper
55. \_\_\_\_ mater
56. Joyce's land
57. London gallery
59. Sweet sandwich
60. Had the mic, say
61. Auction site
62. Pampering, briefly

# calendar

## monday

11.06.17

**Lecture Series: David Lewis —  
“Communities by Design”**  
5–6:30 p.m.  
Kresge Theater, College of Fine Arts  
More info: [soa.cmu.edu](http://soa.cmu.edu)

The immensely accomplished Carnegie Mellon professor David Lewis will be speaking in the next installment of the School of Architecture’s lecture series. Professor Lewis will be speaking about his vision for the future of urban design education. Be sure to listen in this Monday evening.

## tuesday

11.07.17

**Carl Sagan Fest featuring  
Richard Dawkins**  
5–6:30 p.m.  
McConomy Auditorium  
More info: [facebook.com](https://www.facebook.com)

Renowned author and biologist, Richard Dawkins will be on campus this week to speak and to receive the CMU Humanism Initiative’s Carl Sagan Award at the annual Carl Sagan Fest. This event is free and open to all.

## classified

**1655 Shady Avenue, First Floor  
Apartment: 3 BR, 2 Full Bath, LR/DR,  
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Call Larry Newman @ 412-421-3720  
or [lsnsss@verizon.net](mailto:lsnsss@verizon.net) for a tour!

## friday

11.10.17

**50th Anniversary Celebration and  
Founders Exposition**  
11:30 a.m.–4 p.m.  
Carnegie Mellon University  
Register at: [cmu.edu/50/anniversary-weekend](http://cmu.edu/50/anniversary-weekend)

Friday kicks off a weekend of celebrating the merger of the Carnegie Institute of Technology and the Mellon Institute of Science with panel discussions, featured speakers, and plenty of activities.

**Pitt ASA Presents: Anna Akana**  
6–8 p.m.  
William Pitt Union, Lower Lounge  
More info: [facebook.com](https://www.facebook.com)

Youtuber, actress, and comedian Anna Akana is coming to Pittsburgh to share her stories about her life and issues near her heart, such as mental health.

## saturday

11.11.17

**NAT 28 Spotlight Series: The Music of  
George Crumb**  
3:30–9:30 p.m.  
Kresge Theater, College of Fine Arts  
More info: [eventbrite.com](https://www.eventbrite.com)

NAT 28, a group of artists from around Pittsburgh, are bringing incredible contemporary composers to Carnegie Mellon as a part of their annual Spotlight Series. This year, hear the music of George Crumb in this two-concert event.



# wats: ON?

Aisha Han | Visual Editor

Created in honor of architect, Carnegie Mellon alumna, and faculty member Jill Watson, who died in the TWA Flight 800 plane crash, the *wats:ON? Festival Across the Arts* is a biannual festival hosted by the School of Architecture. Faculty and students collaborate with famous artists, honoring the interdisciplinary nature that Watson loved. This year's theme is "SHIFT," curated by Spike Wolff and Eddy Man Kim, which "challenges realms of phenomenal perception." The festival featured an art installation, "Transitional Spaces," created by Hadi Tabatabai, which is located in the College of Fine Arts Great Hall.

