

THE TARTAN

Carnegie Mellon's student newspaper since 1906



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Yuan Bing/Junior Photographer

Reaching new HEIGHTS

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On Thursday, The Tartan was given a behind-the-scenes tour of the Jared L. Cohon University Center expansion construction site. Set to open in May of 2016, the new portion of the building will include a state-of-the-art performance theater, a high-security athletic facility, and perhaps most notable of all, a focal point for the Forbes entrance to the university.

The base project, costing about \$22 million, is a result of years of careful planning, fundraising, and an effort to expand the athletics program at Carnegie Mellon, according to Adam Homer, the campus design and facility development project manager for the CUC expansion, who led portions of the tour. The tour was focused on the athletic facilities, the theater, the campus entry point, and the third floor space.

Athletic Facilities

Assistant Director of Athletics, Recreational Programming Sara Gauntner was also present during the tour, and emphasized how long-awaited the improved athletic facilities are. “We’ve

tried to plan out a one-stop-shop for athletic needs on campus,” she said, acknowledging that between Skibo Gymnasium and the CUC weight rooms, the current facilities are not meeting the existing needs.

The Forbes-facing portion of the first floor will offer strength training with heavy weights, similar to the weight room in Skibo Gym. One side of the room will cater to heavy lifters, while the other will allow for lighter, less strenuous weightlifting. Paneled by glass walls and six skylights, the first floor will fully utilize natural light for the convenience of the users. Further back, students will have access to 180 new rental lockers, two unisex family changing rooms, spacious male and female locker rooms, and private showers. On the second

floor, there are four multipurpose rooms designated for various fitness classes, in addition to a cycling room, and, overlooking the weight room, a cardio-machine space that has a wall of windows looking out to Forbes. Swimmers will also have larger team rooms and physical education instructors will now have classrooms in which to teach.

Director of Student Activities Liz Vaughan said that the flexibility of the spaces was a priority during the expansion planning process. “With more spaces, we can offer more classes. [Students] will be able to find the class that they want to take at a time that is convenient for them.”

The spine of the athletic center will run

See **EXPANSION**, A3

Donut Dash raises \$100,000



Laura Scherb/Publisher

Sophomore mathematical science major Joey Pickens took first place in the men's division of the seventh annual Donut Dash race, organized by the brothers of Sigma Alpha Epsilon, with a time of 12:43. The event took place on Sunday at Schenley Plaza and raised \$100,000 for Live Like Lou, a Pittsburgh-based organization that is focused on finding a cure for Amyotrophic Lateral Sclerosis (ALS), or Lou Gehrig's disease.

Town hall event addresses student, faculty concerns

CHELSEA DICKSON
Staffwriter

Carnegie Mellon University President Subra Suresh took center stage last Wednesday at a town hall event to address questions and concerns from the Carnegie Mellon community. A crowd of mostly faculty and administrative staff gathered in McConomy Auditorium to hear Suresh's ideas about the future of the university, its costs, academics, and culture.

Carnegie Mellon's Vice President of Communications and Marketing Steve Kloehn guided the discussion, and select faculty, staff, and students were asked to share their questions. Kloehn also included questions which had been previously submitted online.

M. Shernell Smith, the assistant director of student affairs, posed the first question: “How do you see staff engagement as a part of the transformative CMU experience? And what do you say to those staff members who don't always

feel like they are at the table for some of those particular dialogues?” she asked.

Suresh named his strategic plan initiative, town hall meetings, email solicitations, and more as ways that his administration has engaged the Carnegie Mellon community. Suresh said he's been pleased with the community's “unprecedented strategic planning,” and suggested that he wants his strategic plan to be a thoroughly dynamic and collaborative project.

When a computer science student asked online whether there was a downside to the Computer Science department's growing number of corporate partnerships, Suresh responded reassuringly. For Suresh, companies like Google, Yahoo, and Microsoft want to have close relationships with the School of Computer Science because of the student and faculty's work. He cited Tata Consultancy Service's recent \$35 million donation to Carnegie Mellon as an example of this support for student's work.

Since the Computer Science student's question was concerned with how certain partnerships could alienate competing companies, Suresh gave a prime example of Carnegie Mellon's more neutral positioning. “We don't take sides,” he explained. “We even work with UPMC and Highmark. If you can do that, you can do anything... There is nothing in these partnerships that conveys exclusivity.”

Sophomore international relations and politics and policy and management double major and Dietrich College senator Michael Gormley said that he felt “disassociated” from Carnegie Mellon's smaller campuses in Qatar and Rwanda. Suresh noted that since the Pittsburgh campus is vastly larger than its international campuses, the size disparity challenges the process of building bridges between the communities.

Suresh did mention the University's IMPAQ

See **TOWN HALL**, A3

FEATURE PHOTO

CMU Active Minds hosts Kai Roberts



On Wednesday, the Active Minds Carnegie Mellon chapter presented a free evening of rap starring Carnegie Mellon alumnus Kai Roberts (TSB '15). Roberts' music is largely focused on rising to face every day with confidence and less stress.

Campus Crime & Incident Reports

Underage Drinking

Sept. 26, 2015

University Police and CMU EMS responded to a report of an intoxicated female vomiting in the Greek Quadrangle. She was provided with medical treatment. The female received a citation for underage drinking.

Public Drunkenness

Sept. 26, 2015

A male identified as a Carnegie Mellon Student received a citation for public drunkenness after he was observed vomiting at a bus stop on Forbes Avenue. The student was provided with medical attention, and University Police took him home safely.

Criminal Attempt

Sept. 28, 2015

A University Security Officer encountered a 30-year-old male attempting to cut a cable lock on a bicycle located at the bike rack in front of the Stever House at approximately 5:20 a.m. The man fled on another bicycle when discovered.

Criminal Mischief

Sept. 29, 2015

University Police responded to a report from a university security officer on patrol of fresh graffiti located on the cable box of Neville Apartments. The incident was documented by University Police.

Alcohol Amnesty

Sept. 26, 2015

University Police, CMU EMS, and City Medics responded to reports of an intoxicated female at Stever House. Since help was summoned by a friend accompanying her, this incident met the criteria for alcohol amnesty. The female was provided with medical attention.

Disorderly Conduct

Sept. 27, 2015

University Police responded to an odor of marijuana at Webster Hall. An occupant of an eighth floor room identified as a Carnegie Mellon student was cited for disorderly conduct. Multiple items of contraband were confiscated.

Theft of Various Computer Items

Sept. 28, 2015

A theft of computer items was reported to University Police at room 146 in Roberts Hall. A laptop along with several accessories were reported missing. No signs of forced entry were observed on the scene. The investigation is ongoing.

Engagement and Wedding Ring Theft

Sept. 29, 2015

A theft of engagement and wedding rings was reported by a CulinArt employee. The victim stated that the rings had been removed sometime on Sept. 28. The investigation is ongoing.

NEWS IN BRIEF

Boeing creates aerospace data lab at CMU

Chicago-based aeronautics and space engineering company Boeing has teamed up with Carnegie Mellon to create a new lab on campus. Officially called the Boeing/Carnegie Mellon Aerospace Analytics Lab, the lab is meant to expand Carnegie Mellon's research in aerospace, language — and a subject quite relevant on Carnegie Mellon's campus, — machine learning.

Having several contracts with the federal government, Boeing teamed up with Carnegie Mellon to utilize the school's expertise in these areas. Professor of Computer Science and Director of the Language Technologies Institute Jaime Carbonell leads the team of Carnegie Mellon researchers.

Boeing is no stranger to Carnegie Mellon, nor to its Pittsburgh campus. In fact, one of the company's former employees, John Vu, is now a professor in language technologies and computational biology. Vu now plays an

extensive role in coordinating the relationship between the school and the company.

University President Subra Suresh has expressed excitement in the role the new lab will play. "Researchers from Carnegie Mellon and Boeing have enjoyed a collaborative relationship for more than 30 years and we're proud of the fact that hundreds of our graduates are working at Boeing," Suresh said in a university press release.

Chief Information Officer at Boeing Ted Colbert also expressed excitement for the project. Describing the lab as a one-of-a-kind research center, Colbert hoped to see it benefit Boeing's corporate endeavors in the near future. "We're aiming to push the technology envelope," Colbert said in the University press release.

"We have the best and the brightest faculty at a leading institution focused on how we can innovate and solve business challenges for today and into the future."

CMU engineers add optic sensors to bots

A new type of robotic hand made its way into the world of robotics through the efforts of Carnegie Mellon engineers: a hand with optic sensors. The hand has fingers just as a human hand does, with 14 separate optic sensors, each acting to sense the hand's position relative to its surroundings — that is, anything touching the sensors with a force of a tenth of a newton or greater.

"If you want robots to work autonomously and to react safely to unexpected forces in everyday environments, you need robotic hands that have more sensors than is typical today," assistant professor of robotics Yong-Lae Park said in a university press release.

These hands also need to mimic the human hand. "Human skin contains thousands of tactile sensory units only in the fingertip and a spider has hundreds of mechanoreceptors on each leg, but even a state-of-the-art humanoid such as NASA's Robonaut has only 42 sensors in its hand and wrist," Park added.

Carnegie Mellon researchers are excited about this new capability, and presented it at the 2015 IEEE International Conference on Intelligent Robots and Systems (IROS) in Hamburg, Germany on Oct. 1.

Compiled by
BRIAN WALSH

WEATHER

TUESDAY	WEDNESDAY	THURSDAY
73° / 55°	72° / 48°	72° / 54°
FRIDAY	SATURDAY	SUNDAY
72° / 54°	63° / 48°	66° / 45°

Source: www.weather.com

Corrections & Clarifications

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



INTERNATIONAL NEWS IN BRIEF

U.S. accuses Russia of aggregating Syria

MOSCOW — Russia took major military action in Syria. As a response to the escalation of conflict within the region, Russian forces launched airstrikes aimed at ISIS terrorists. Yet, they instead targeted groups fighting the Assad regime, causing U.S. diplomats to question the legitimacy of the operation.

Turkish forces save 3,500 Syrian refugees

IZMIR, Turkey — The Syrian refugee crisis continues in the Aegean Sea as Turkish coast guards recovered 30 bodies and rescued 3,500 refugees over the course of the past week. The refugees were attempting to cross the Aegean with the assistance of human traffickers to reach Kos, a Greek Island.

Taliban takes Kunduz, heavy fighting rages on

KABUL, Afghanistan — Residents fled Kunduz as the Afghan Government rallied to retake the Afghan city from the Taliban. The city is considered to be a highly strategic location by both parties. Anxiety in the provincial capital has increased, causing analysts to worry about a domino effect that could leave the entire state in political turmoil.

Tension decreases in Ukraine with Paris talks

KIEV, Ukraine — Ukraine and Russian-backed rebels have agreed to withdraw remaining heavy artillery and weapons from the front lines, a move that could signal the end on the war, according to negotiators from both parties. Talks will continue in Paris on Friday in a meeting brokered by French and German officials.

Guatemala struggles amidst strong rains

GUATEMALA CITY — Continued heavy rain led to an immense rockslide, displacing hundreds of people from their homes in the small Central American country. Search and rescue operations continue as the country struggles with one of the worst natural disasters it has faced in the past decade.

Source: *The Guardian*

Source: *Anadolu Agency*

Source: *The New York Times*

Source: *The Telegraph*

Source: *Reuters*

Compiled by
ALP MÜYESSER

Suresh speaks at town hall



Abhinav Gautam/Photo Editor
University President Subra Suresh addressed concerns on diversity, university funding, and more at the town hall event last Wednesday.

TOWN HALL, from A1

program, which connects Pittsburgh students to Qatar students with annual trips to the different campuses. Student groups like Project Rwanda also reach out and engage with the other campuses, he said.

On a heavier note, one submitted question addressed the campus sexual assault crisis. Suresh applauded the work of Dean of Student Affairs Gina Casalegno as well as the Sexual Violence Prevention Program enacted last year in combating this issue faced by campuses nationwide.

Suresh acknowledged that campus sexual assault is a “complex, national issue we need to address as a community. Everyone in the community has a role to play, including bystanders.” He mentioned that upcoming roundtables and new programs this year will continue to address the pressing matter.

Ömer Akin, professor of architecture, questioned whether the university truly sustains its commitment to creativity. Akin expressed concern for flagging support of the College of Fine Arts and Dietrich College of Humanities and Social Sciences, two colleges which Akin believes to be centers of creativity on campus.

Suresh confirmed that his strategic plan will foster and support creativity on campus. He mentioned that both schools were recently awarded \$1 million “challenge grants” last year. “Use

this to support your faculty and we would like to see how you can grow this,” he told the schools. “I’ll be coming back to see how they’ve grown it before too long.” Suresh also believes that the Digital Humanities program should also promote Dietrich.

Suresh still believes that both schools need to provide a clearer idea of what they will add to the Forbes Corridor, which he hopes will be the premier hub of creativity and innovation between Silicon Valley and the East Coast. “Is it backed by reality? Is it backed by data? Yes,” he affirmed.

An undergraduate student posed a question concerning race, asking how can Carnegie Mellon better embrace the evolving definition of diversity. President Suresh promised dedication to this challenge. “We will do everything possible to attract a diversity of student and faculty cohorts,” he said.

He used this year’s undergraduate freshman class as an example of increasing diversity. Although Western Pennsylvania is not known for attracting the most diverse of people, he feels confident that Carnegie Mellon has the resources to attract people of all backgrounds.

Again concerning Carnegie Mellon’s diverse student body, a graduate student expressed frustration over the complicated visa process that international graduate students face in the U.S. Suresh, who was once an international graduate student himself, felt that

Carnegie Mellon needs to find sustainable ways to support international students who must deal with visa policies, family issues, and homesickness.

In the past, Suresh has advocated in front of Congress for an easier visa application process. Although Carnegie Mellon has little influence with the State Department regarding visas, the school has helped in cases regarding Ph.D. candidates.

Kloehn then announced that they had received numerous questions online regarding tuition costs. President Suresh framed the dire state of rising tuition costs as “the cost of education versus the investment in education.” He compared Carnegie Mellon’s slower rates of rising tuition to those of other colleges.

Since May 2014, Carnegie Mellon’s endowment has grown significantly. While Carnegie Mellon’s endowment barely stacks up to peer institutions’ endowments, he said, the school still manages to compete on a high level. However, he still stressed the need to establish a “permanent mechanism to continue to help our students.”

Lastly, Suresh discussed how technology will impact higher education in the years to come. He does believe that online learning will disrupt universities’ financial models, yet still sees students wanting and needing to be physically present on campuses.

Suresh will host his next town hall in the spring.

Tour sheds light on expansion



Yuan Bing/Junior Photographer
The CUC expansion will include new locker rooms and showers for the athletic facilities.

EXPANSION, from A1

from the reception desk to the back wall of the building. For security purposes, access to all facilities will require students to swipe their Carnegie Mellon ID, similar to the turnstiles near the pool and current locker rooms.

The CUC expansion is part of a three-phase plan to re-imagine athletics and recreation at Carnegie Mellon, Gauntner said. “I’ve been lucky to be around for two of the three phases during my time here.” The next part, she said, involves slowly shutting down Skibo Gymnasium and repurposing the space.

Performance Theater

The first floor’s key attraction is the studio theater. The theater was built to serve the needs of the many student groups on campus, and as such, has a variety of specifications that will allow it to suit these needs. The floor of the theater will be fitted with heavy-sprung padding to protect the dancers who will use it, from Bhangra to Dancer’s Symposium. The wall of mirrors on one side of the theater is also geared toward making rehearsals easier for such groups.

The acoustic properties of the theater will make it ideal for musical groups, such as the All University Orchestra or the Kiltie Band, to practice. The walls are insulated with six inches of foam for maximum noise canceling, as well as multiple layers of thicker drywall and space between the layers that will make the room virtually soundproof, according to Homer.

The theater offers many options for the staging and direction of productions, so that sets can be positioned in virtually any way. Telescopic

seating for 140 can be pulled out from the wall as far as the groups need it to be, or groups will also be able to take chairs from the roomy storage areas surrounding the theater to create an in-the-round theater experience, said Vaughan.

A balcony with extension cables allows performance technology to be set up from any angle, and sets that are constructed in the theater can be stored in the rooms on the other side of the walls. A green room will serve as a changing area for dancers or performers, which Vaughan says will make performing in this theater easier than performing in the current CUC facilities and eliminate the need for performers and patrons to share bathrooms.

Campus entry point

According to Mandi Semple, director of marketing for student affairs operations, the main entrance to the CUC expansion will face Forbes, and finally offer a real “front” of campus. The CUC expansion project and the new Tepper Quadrangle will both play into the idea of changing the way that the university interacts with Forbes Avenue, according to Vaughan, as well as acting as a stronger entry point for visitors. “We all saw people walk out of the old parking garage and looking around and getting lost because it was so unclear where they were supposed to go. Now, they will walk down a sidewalk and walk right into the new expansion.”

Once inside, visitors will be greeted by a large lobby meant to function similarly to the CUC’s current black chairs common space. An alumni-donated Dale Chihuly sculpture will hang overhead against a large,

two-floor mural behind the main staircase. The designers have planned to create rain gardens outside, which will complement the 62,000 square feet of the building’s glass and zinc exterior and will also serve to separate the building from the noise and traffic on Forbes Avenue.

Third floor

As many community members will remember, the design of the CUC yielded an extra 4,559 square feet of space that was dubbed the “shell space” last year. Purchased by the Undergraduate Student Senate and the Graduate Student Assembly (GSA), the space is divided and designated into 3,025 square feet and 1,534 square feet zones for each group, respectively. The rooms will serve as collaborative space for both bodies of students. According to Vaughan, the rooms will have plenty of power outlets, whiteboards, and tables.

This Wednesday, Oct. 7, examples of the tentative furniture selections for both these spaces and the lobby will be available for students to try and talk about in the Kirt Commons in the CUC. The design team and the Carnegie Mellon project coordinators would like to hear furnishing options and design details that best cater to the student body.

The CUC expansion is just one part of a larger effort on behalf of the Carnegie Mellon administration to face-lift the campus and meet the ever-changing demand of students. According to Vaughan, tours of the facility will continue to be offered to a variety of groups over the next few months, particularly the groups of students who have the greatest stake in the new facilities.

“The Greek Grille” at St. Nicholas

Come and enjoy our outdoor party!
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Ya Mas!

Where: St. Nick’s Greek Orthodox Cathedral, 419 S. Dithridge
When: October 8, 9 & 10 from 11:00am-8:00pm

‘What Jane Saw’ creator talks time traveling through technology

VALENE MEZMIN
Assistant News Editor

Jane Austen has been part of the literary canon for centuries. *Pride and Prejudice*, *Sense and Sensibility*, *Emma*, and *Persuasion*, to name a few, are novels that lived long past their production in the 1800s and continue to garner a widespread fan base that still reads and glorifies these novels to this very day.

“Janeites”, as her more devoted fans are called, can be found in many parts of the world, reading, analyzing, and imagining the works of Ms. Austen.

Last Thursday, Associate Professor of English at the University of Texas at Austin Janine Barchas, a Janeite herself, gave a talk as part of the CAS Speaker Series on her use of modern technology that allows users to travel back to 1813 and take a step into the life of Jane Austen.

“What Jane Saw” is an on-line digital gallery that allows viewers to observe a room-by-room deconstruction of Sir Joshua Reynolds’ paintings that Austen visited on May 24, 1813 at 52 Pall Mall in London. Barchas began her talk by providing some background on her fascination with this particular moment in the life of Jane Austen.

Janine Barchas is the author of *Matters of Fact in Jane Austen*, a novel that focuses on the celebrity culture of Ms. Austen. During her research, she came across a letter Austen wrote to her sister, Cassandra, about the museum exhibitions she visited on May 24, 1813.

The letters describe her quest to search for portrait representations of her *Pride and Prejudice* characters in Sir Reynolds’ paintings. In the letter, she describes her success at finding a painting that looked like Mrs. Bingley but her inability to hunt down one

that resembled Mrs. Darcy.

“This was my smoke and gun.... She’s looking for Mrs. Darcy and Mrs. Bingley,” Barchas said, reliving the feeling of excitement she had felt upon finding this tidbit of information. Austen was born into modest beginnings and did not interact with the social elite of her time. Reynolds’ paintings represented these same elite celebrities, and Austen, through examining his works, was able to immerse herself in British celebrity culture.

And so the task to recreate the exhibit began. Barchas, with help from her programming, art, and design students at the University of Texas at Austin, underwent the task of turning her ideas into reality — well, virtual reality.

They underwent the meticulous task of determining the exact layout of the pictures, finding the perfect layer of colors that would help date the

images, and figuring out the perfect lighting. The website was created with the use of Google SketchUp.

Barchas talks about other similar digital heritage projects that were also released around the same time as “What Jane Saw.” One of these was the Chicago Art Institute’s celebration of the 100 year anniversary of Jane Austen’s attendance to the Armory Show which incorporated black and white photographs of the walls from that particular show.

“If Jane Austen had done what I wish she had, which was to take out her iPhone and shoot me some photographs, I would’ve had that too,” Barchas said. Barchas created a website that allows us to travel back in time and view the amazing art works that Austen got to experience so many years ago.

Not only did Barchas set out to digitally reconstruct the highly acclaimed paintings

of Sir Jonathan Reynolds — something that in itself would be a great achievement — but she wanted to view them specifically through the lens of Jane Austen. Over time, her initial slideshow of ideas blossomed into a fully formed website that has been viewed by more than 150,000 people around the world.

Viewers are able to click on the image of each individual portrait and learn about the history of the paintings and the people represented in them, but also how each picture connects back to Jane Austen.

Some of the people in the paintings include King Lear, Louis Phillipe Joseph, Captain John Hamilton, and Emma Hamilton, who was, according to Barchas, “the Marilyn Monroe of Jane Austen’s time.”

The website has become an overwhelming success, even deemed as a first in the digital humanities. Carnegie Mellon

Professor Jamie Smith, who is currently teaching “Pride and Prejudice and Popularity” said, “Barchas’s work is brilliant in that it combines immersive entertainment (like you might experience when watching a Jane Austen film) with detailed historical accuracy and scholarship. Projects like these highlight the value of digital humanities and can provoke new ideas in fields like cultural studies and performance theory.”

What’s next for Janine Barchas? Currently, “What Jane Saw” is in the works of becoming a 3D interactive visual tool for viewers to be able to simulate the experience of embodying Jane Austen as she walks through the museum. Barchas will also be co-curating the “Will and Jane: Shakespeare, Austen, and the Cult of Celebrity” exhibit at the Folger Shakespeare Library with Carnegie Mellon’s Professor of English Kristina Straub.

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“Collaborative learning” fails to collaborate with introverts

SARAH BENDER
Junior Staffwriter

When you walk into a classroom today, you are just as likely to find students engaged in a class discussion or group project as listening to a lecture — if not more so. With increased emphasis on “collaborative learning” and “flipped classrooms,” many schools today are praised for being more dynamic, interesting, and educationally beneficial than traditional schools. Even at colleges, seminars are rapidly becoming more popular than traditional lectures.

But some shy, more introverted students suffer perpetually over participation grades, and sometimes no amount of pleading and punishment can encourage them to speak up. Perhaps educators need to step back and examine the reason behind these students’ lack of contribution.

It is true that some students

thrive in social situations, learning best when discussing their ideas out loud with others. However, there are some students who process information most efficiently on their own, and even those whose fear of speaking aloud can have a crippling effect on their education. The true danger of this “one size fits all” model for education is that some students’ needs will be continually overlooked in favor of the majority.

The primary argument for collaborative learning at the expense of introverts’ comfort is that all students, even the quiet ones, need to be prepared for “real world” situations that will arise in their professional lives. This argument may well be grounded. Even if the students manage to find a job where they

don’t have to interact with others, it is almost guaranteed that they will be forced to speak up during the interview process.

Rather than punishing students for their fears, there must be a gentler way to ease them into feeling comfortable with sharing their opinions out loud. Maybe instructors can start out by having students speak in small groups before they graduate to larger full class discussions. Maybe discussion questions can be given to the class in advance so that students will have time to plan their answers more thoroughly.

Also, teachers and schools should keep in mind that there are many

other ways these students might participate. Maybe a student takes careful notes throughout a discussion so they can think about the ideas on their own. Maybe the student thrives during one-on-one discussions, or turns in well-written responses to prompts based on the material.

In other words, just because a student is silent doesn’t mean they are not actively engaging in the learning process. Educators shouldn’t be so quick to write off quiet students as lazy or uninterested.

By definition, introverts need quiet time to process information and recharge — something being constantly stimulated by group activity will

not grant them. In the context of group discussions, some introverts may contribute as much as any extroverted student; the underlying difference is that this is not the best way for them to learn.

While American schools are increasing emphasis on “collective” learning, other cultures continue to emphasize individual, instruction-based learning. International students at universities may therefore be at a disadvantage.

All students are different, and as such, they respond in different ways to various teaching methods. Some students are frightened by group discussions, some are drained by one-on-one interaction in smaller groups, and others may be easily distracted or have difficulty focusing during independent reading or studying time.

Formal education should meet in the middle of all these students’ needs. There is a fine line that educators must walk between genuinely preparing students for the future and making them afraid to come to class.



Louise Zhou/Junior Staff Artist

LETTER TO THE EDITOR

Build relationships with policy makers to create change

In last week’s article, “CMU’s visiting policymakers are all talk, not enough action,” Satvika Neti gets it right: we need to advocate for change and educate ourselves to create it. But there are smart ways to advocate for what you want.

The Graduate Student Assembly (GSA) regularly advocates on behalf of Carnegie Mellon’s graduate population. Recently, we had students in Washington D.C. meet with Senator Bob Casey (D—PA)’s and Representative Michael F. Doyle (D—PA)’s offices to discuss graduate student issues. Our agenda included student visa reform, graduate education, open access, educational resources, and graduate student debt.

These meetings went well, and they were interested in our causes. The GSA has found that giving the right kind of information is how you get policymakers to care. We’re working to become a go-to source of information for these Pennsylvania political offices by sharing graduate student stories, backing our proposals with facts, and generally building working relationships with them.

We were there to make graduate

students’ experiences vivid for the policy makers. We shared stories of students stuck out of the country because of single-entry visa issues and students who almost had to put the start of their American dream on hold because of graduate student loans. By sharing these experiences, we got them interested in what we had to say. With their interest piqued, we moved on to providing evidence to support our claims and propos-

als. As the first people in Casey’s office to support open access, or unrestricted online access to research, we were able to counter publishing industry myths and share how open access policies actually work. Due to that evidence, the staff seemed more receptive in supporting our goals.

The GSA went to D.C. to build relationships with politicians so that we can serve as representatives for graduate student issues. Part of this

means that we thanked politicians for supporting our causes, like Casey did when he extended the Perkins Loan program or Doyle does by supporting open access. It also means that we return biannually and maintain communication in the time between our visits. To make a difference with politicians, you must build relationships based on information exchange. That’s what policymakers want, and that’s what you need to do to create change.

Daniel Gingerich
Ph.D. Student
Engineering and Public Policy
Vice President of External Affairs
Graduate Student Assembly

“We were there to make graduate students’ experiences vivid for the policy makers . . . By sharing these experiences, we got them interested in what we had to say.”

A PERSON’S OPINION

Compiled by Sarah Gutekunst

The Tartan broke out its cozy sweaters and cool leather jackets this week. So we asked, **What’s your favorite Autumn treat?**



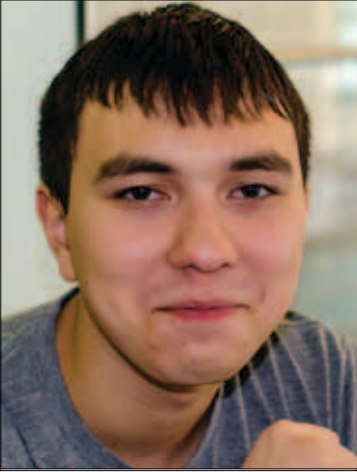
Taisuke Yasuda
Computational Neuroscience
First-year

“Apple cider.”



Emily Stewart
BXA Musicology, Global Studies
Sophomore

“Pumpkin muffins.”



Eliot Robson
Computer Science
First-year

“Steak. It’s the treat for all seasons.”



Sarah Duncan
Logic and Computations
Junior

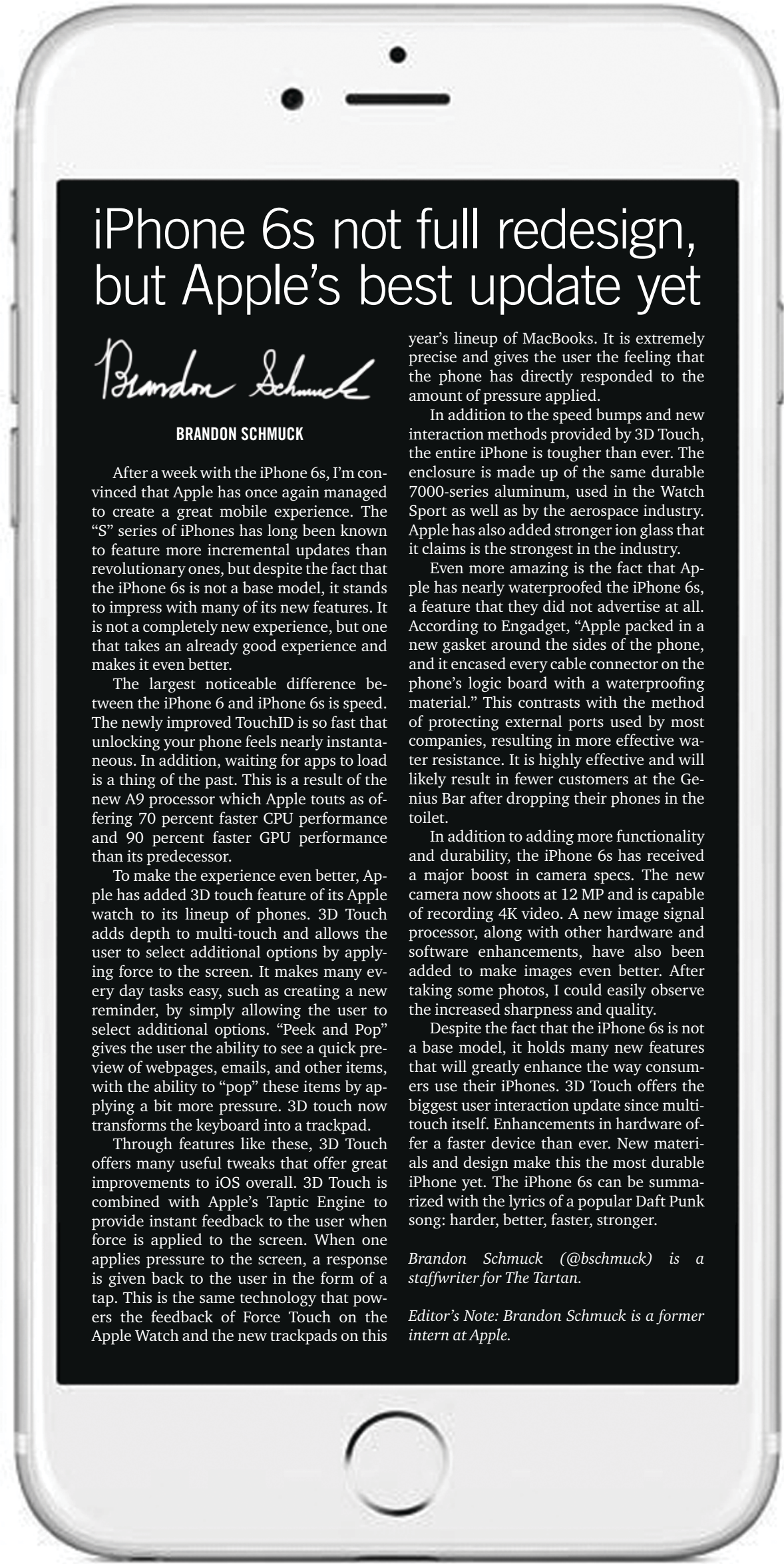
“Apple pie.”



Theophilus Onime
Information Systems
Senior

“Pepperidge Farms Pumpkin Cheesecake cookies.”





Courtesy of Wikimedia Commons

Water on Mars shows astronomy deserves more federal funding

HANNAH JANG
Junior Staffwriter

A general rule of thumb is that if Google cares enough to feature a special doodle for a specific event, something big is happening. On Sept. 29, users around the globe were pleasantly surprised with a new Google doodle celebrating the official discovery of water on Mars.

NASA's analyses of the planet have proven that enigmatic streaks on Mars' slopes are made from salty, liquid water. This water may have the capacity to support the chemical reactions necessary for life. While we could now hope to fulfill our childhood *ET* dreams, this could more realistically signal the possibility of sending the first manned spacecraft to Mars. Since scientists now know more about the planet, they will be better equipped to engineer a spacecraft suitable for such a trip.

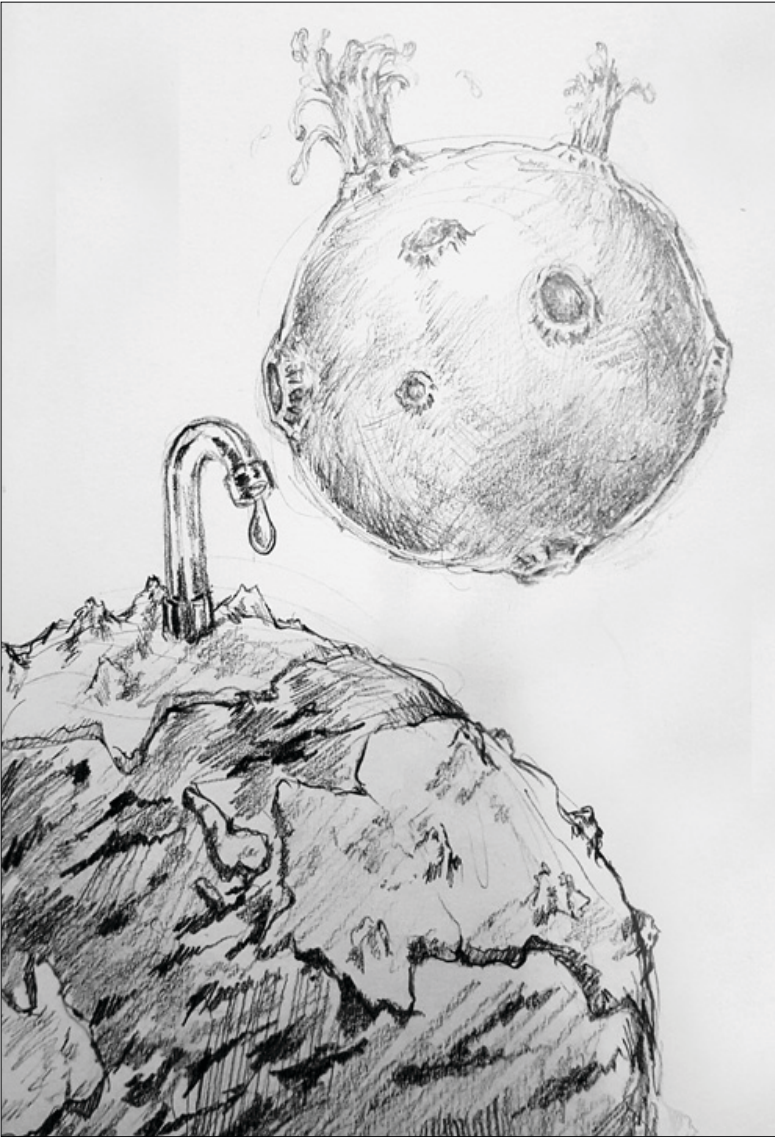
With greater knowledge of the mysterious planet has come an emergence of related projects. These include Mars One, a non-profit organization with the objective of establishing a permanent human

colony on Mars. One-way journeys are scheduled to depart starting in 2026, and from a pool of 200,000 applicants from 35 countries, 100 crew members have been selected. After the discovery of water on Mars, the possibilities are endless.

Certainly, this recent discovery has successfully reached mainstream media. It has been covered by many major news sources alongside Google. However, interest in astronomy is rare in this modern technological age. Many continue to question the importance of astronomy in a world apparently operated and dominated by technology.

Congress continues to cut NASA's federal funding. This year, NASA's budget totaled 0.50 percent of the federal budget (\$17 M), in stark contrast to the height of the space race in the 1960s, when NASA was allotted 4.41 percent of the federal budget (\$43 M).

Although the discovery of water in Mars is exciting in itself, the uncommon feat of space-related news making national headlines is also an exciting prospect for many citizens who believe more attention should be given to astronomy.



Eunice Oh/Art Editor

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CUC 314



Science & Technology

Dark energy instrument receives funding from Department of Energy

RYAN BRIGDEN
Junior Staffwriter

In the ongoing effort to understand the structure of the universe, the recent federal approval of the Dark Energy Spectroscopic Instrument (DESI) has ensured a promising next step. According to DESI’s website, DESI “will measure the effect of dark energy on the expansion of the universe and obtain optical spectra for tens of millions of galaxies and quasars, constructing a 3-dimensional map spanning the nearby universe

to 10 billion light years.” The receipt of Critical Decision-2 funding from the Department of Energy has secured funding of the project for the next ten years, allowing scientists to gather information about the nature of dark matter, dark energy, and the expansion of the universe. Shirley Ho, Assistant Professor of Physics and a member of Carnegie Mellon’s McWilliams Center for Cosmology, is the co-chair of the project’s Galaxy and Quasar Clustering Working Group. In this capacity, Ho leads the preparation

and analysis of data received from the telescope. Over two hundred researchers from around the world will work alongside Ho. “DESI will push science further than we have ever gone before,” Ho said. “We will get a map of the universe from when the universe was very young, about one-seventh of its current age. This will help us to better understand dark matter, dark energy and other mysterious things in our universe.” Among other questions, Ho and her colleagues hope to gain a better understanding

of the accelerating expansion of the universe, an observation not in line with Einstein’s theory of gravity. Beyond mapping the universe, DESI will provide valuable information that will allow researchers to envision baryon acoustic oscillations, which are density fluctuations in the early universe. DESI will also provide insight into the standard model of particle physics by focusing on the total mass of neutrinos in the universe. DESI is set to be mounted on the Mayall Telescope, which is operated by the National

Optical Astronomy Observatory and is located in Tucson, Arizona. In order to meet DESI’s operational requirements, the Mayall telescope will be augmented with new, intricate glass lenses that will help focus light onto DESI’s focal plane. 5,000 robotic arms will position optical fibres so that they capture light from a specific point of interest, such as a galaxy or quasar. With this sophisticated tool, researchers aim to measure spectra of over 30 million galaxies and quasars. The Baryon Oscillation Spectroscopic Survey of the

Sloan Digital Sky Survey, DESI’s predecessor, was only able to measure approximately one tenth as many objects. With funding in place, the first measurements from the Mayall 4-meter telescope in Tucson, Arizona are expected to begin in 2018. Dark matter and energy are enigmatic quantities that continue to evade the understanding of modern science, but DESI is set to begin a decade of unprecedented exploration, which could hopefully lead to answers to some of our questions.

CMU professor on *Popular Science’s* Brilliant Top 10 list



Courtesy of Kathryn Whitehead
Kathryn Whitehead, a professor of chemical engineering at Carnegie Mellon University, is researching nanoparticles for use in drug therapy.

RAGHUNANDAN AVULA
Staffwriter

Medicine is going through an incredible transformation and evolution as scientists uncover new and advanced ways to manipulate biology in the hope of improving human lives. Kathryn Whitehead, an assistant professor of chemical engineering at Carnegie Mellon, has made incredible contributions to this advancement through her extensive research on nanoparticles that target specific areas of the body in order to curb the threat of disease. Her research and accomplishments have recently earned her the honor of being featured on

Popular Science’s Brilliant Top 10 List in 2015. Whitehead completed her undergraduate degree in chemical engineering, but wasn’t particularly interested in applying her knowledge to oil refineries. As she began her graduate studies, chemical engineers were just beginning to extend their field into the scope of biomedical applications. Whitehead felt that using techniques “to help people and their problems” was a particularly rewarding use of her education. Whitehead explained that chemical engineers developing techniques to modernize medicine generally have two goals. The first goal is to take

drugs that are currently available in a non-friendly format, such as injections, and develop a friendlier system of delivery. For example, diabetics normally take insulin injections to control their blood sugar level, but researchers hope to bypass the injections by using a pill or a patch system to introduce a protein therapeutic into the body. The second goal is to take drugs that currently don’t have FDA approved methods of delivery and develop mechanisms for an efficient delivery system. These drugs, for example, can include modern genetic based mechanisms that manipulate the underlying biochemistry inside cells by altering DNA and protein expression. Whitehead and her team of researchers have been working in the lab over the past five years on identifying useful chemical make-ups for nanoparticles using high throughput screening, a scientific method that uses robotics, data processing software, and various detectors to quickly run millions of chemical, genetic, or pharmaceutical tests. Throughout this process, Whitehead’s team has identified a subset of chemical compositions that are beneficial for turning the nanoparticles into useful tools for drug delivery. “We now have the technology, and our goal is to apply it to a variety of diseases,” Whitehead said. The nanoparticles are carefully designed to distinguish between healthy and non-healthy cells using both active targeting and more subtle approaches. These methods can be extremely useful in cancer treatment. Current cancer treatment methods involve exposing the body to toxins in hope that the

See **NANOPARTICLES**, A10

HOW THINGS WORK

Development of television includes complex electronics

JONATHAN CALVELLO
Junior Staffwriter

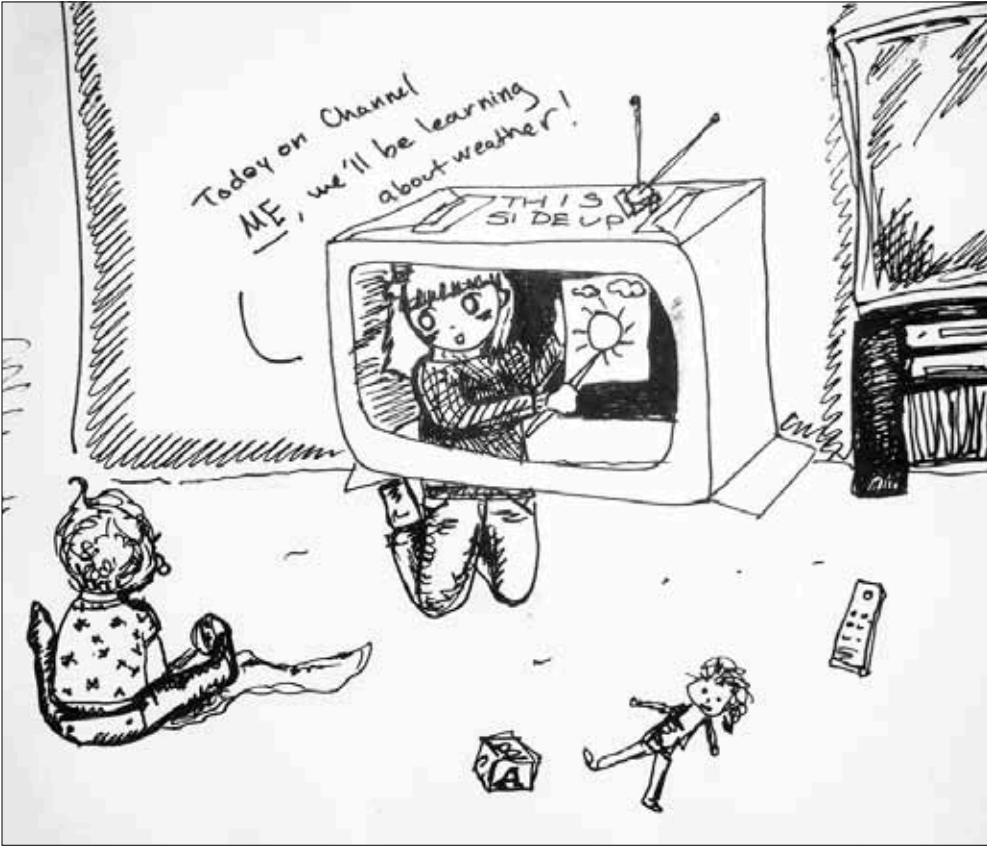
My personal favorite was *Breaking Bad*. The storyline was great, the acting was phenomenal, and did you see that ending? Fantastic. I’m talking about my favorite television show, and, for those of you who aren’t laptop Netflix junkies, the television provides the outlet through which we watch these shows. Beginning in 1897, when J.J. Thompson was able to experimentally deflect cathode rays, the television has had a long and storied history. All-color electronic televisions were first standardized in 1953, but it wasn’t until 1990 that the modern version of digital television became possible. The first type of television

Television is a relatively modern invention that has advanced from low-resolution, black-and-white images to high-resolution, richly colored displays.

to become industrially popular was the analog television. The analog television contains a cathode ray tube (CRT), which is a vacuum

containing an electron gun, a positively charged anode, and a negatively charged cathode. The electrons emitted from the electron gun are negative, so they flow from the cathode to the anode. The electron beam is then concentrated through a device called a focusing anode, after which it hits a phosphor screen on the opposite end of the CRT that glows when struck by high-energy electrons. In order to scatter the electrons across the screen and produce a full image, a copper wire coil is placed in the CRT. This coil creates a magnetic field when an electron beam is passed through it, and this magnetic field pushes the electrons in varying directions, causing

See **TELEVISION**, A11



Emily Giedzinski/Staff Artist

SCITECH BRIEFS

Large polymer additive makes fuel less explosive

Researchers at the California Institute of Technology have engineered a “mega-supramolecule” that can be added to flammable fuels such as gasoline or kerosene to ward off explosions in the event of an impact. During a vehicular accident, fuel droplets tend to form clouds, which linger in the air and create violent explosions when ignited. The new additive consists of a large polymer that interacts with fuel molecules. This interaction produces much larger droplets which do not linger, effectively negating the extremely dangerous fuel clouds made by smaller molecules. The new additive also breaks apart under pressure, which ensures that the additive will not clog fuel pumps.

Source: American Association for the Advancement of Science

Porous portabella mushrooms preserve cellphone batteries

It’s the marriage of the century: fungi and electronics. Researchers at the University of California, Riverside Bourns College of Engineering have turned to portabella mushrooms to present a low-cost and environmentally friendly alternative for graphite anodes in rechargeable lithium-ion batteries. The mushrooms are porous, meaning they feature a lot of small spaces through which liquid and air can pass. When applied to batteries, this structure creates more space for energy to be transferred and stored. In addition, using the mushrooms in anode fabrication could allow batteries to increase in capacity with use, rather than decrease, due to their high potassium content, which allows activation of certain dead-end pores during the battery’s use.

Source: Science Daily

Baby booty bacteria found to predict asthma

Researchers working on the C.H.I.L.D. study examined stool and urine samples from over 300 babies at three months old and then again at one year. They also acquired their health information at one, three, and five years old. Upon inspection, they discovered a correlation between low or undetectable levels of four certain bacteria at three months and the development of asthma at one year old. This discovery could help speed up asthma diagnosis, but could also help identify the cause of and prevent asthma all together. This research created statistically significant results that provide clout to the hypothesis that the microbiome — the ecosystem of bacteria within our bodies — has significant effects on our health.

Source: American Association for the Advancement of Science

Placebo predicts effectiveness of real drug

Researchers at the University of Michigan’s Medical School have long been pioneers in studying the brain’s “painkilling” mu-opioid system and its response to placebo drugs. In a recent study, they showed that participants with depression who reported symptom improvement after taking a placebo showed the strongest mu-opioid response in brain regions involved in emotion and depression. These individuals were also more likely to show signs of improvement when taking the real drug than those whom the placebo did not affect. These findings are the first to show that the brain’s opiod system is involved in the body’s response to antidepressants and placebos, and could be used to develop better, faster-acting antidepressants.

Source: Science Daily

Researchers search for the formula for happiness

Christian Bayer, from the Hausdorff Center for Mathematics at the University of Bonn, has established a connection between long-term increases in income and personal happiness and satisfaction. This research has shown that just having more money does not make one more content; only long-term income increases affect happiness. The findings also identified that individuals who consistently have more work are less happy. This contradicts the idea that people are more happy with any job than none at all, suggesting that it is not the lack of work, but the lack of income from which people suffer. Bayer says that “the formula for greater satisfaction in life seems to be: persistently more money while working the same number of hours.”

Source: Science Daily

Researchers map reactions in muscle during exercise

Research completed at the University of Sydney’s Charles Perkins Centre provides a comprehensive blueprint of the 1,000 molecular reactions that occur in skeletal muscles during exercise. This was done by analyzing skeletal muscle from untrained, healthy males ten minutes after intense exercise. This breakthrough will allow researchers to focus their efforts and develop drugs which target not a single chemical, but multiple molecules and perhaps even entire pathways. This discovery establishes a basis for the development of drugs which can mimic the beneficial effects of exercise for patients who need the effects of exercise, but cannot exercise themselves.

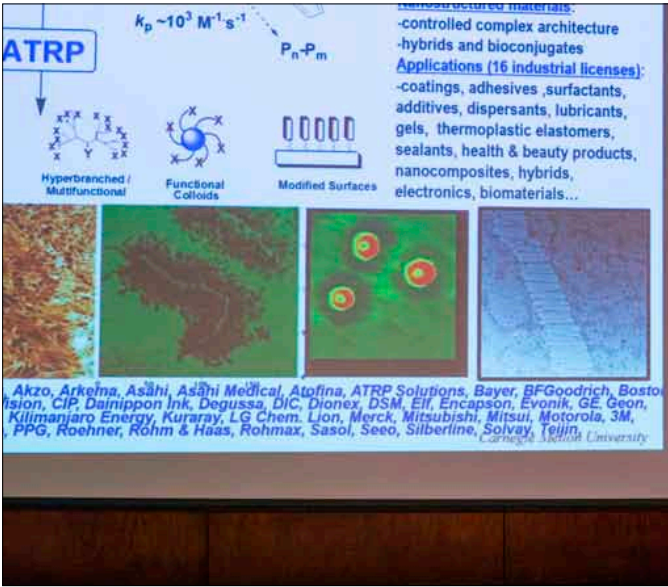
Source: Science Daily
Compiled By **JOSH BROWN**

Krzysztof Matyjaszewski wins Dreyfus Prize for polymer research

YUE YIN
Junior Staffwriter

The Camille and Henry Dreyfus Foundation has announced that Krzysztof Matyjaszewski, J. C. Warner University Professor of Natural Sciences at Carnegie Mellon University, has won the 2015 Dreyfus Prize in the Chemical Sciences. According to www.dreyfus.org, the Dreyfus Prize is awarded biennially and “recognizes an individual for exceptional and original research in a selected area of chemistry that has advanced the field in a major way.” This year’s topic was *Making Molecules and Materials*. While presenting the award, Henry C. Walter, President of the Dreyfus Foundation, said, “Krzysztof Matyjaszewski’s work in polymer chemistry follows in the tradition of Camille and Henry Dreyfus, who were major innovators in the field of material engineering in their day. We are proud to recognize his immense accomplishments with the Dreyfus Prize.” Since the award is presented at the winner’s institution, Matyjaszewski gave an enlightening lecture about his research during the award ceremony last Wednesday in the Mellon Institute Auditorium.

Matyjaszewski’s greatest achievements lie in the development of the Atom Transfer Radical Polymerization (ATRP) process, defined by the International Union of Pure and Applied Chemistry (IUPAC) as “controlled reversible-deactivation radical polymerization.” In this process, the deactivation of radicals, or highly reactive molecules, involves reversible atom transfer or reversible group transfer catalyzed usually, though not exclusively, by transition-metal complexes. Matyjaszewski explained ATRP to the public as a method that uses



Henry C. Walter (top left), President of the Dreyfus foundation, University President Subra Suresh (top right), and Krzysztof Matyjaszewski (bottom), a J. C. Warner University Professor of Natural Sciences at Carnegie Mellon, spoke at the Dreyfus Awards, where Matyjaszewski was given the 2015 Dreyfus prize.

macromolecular engineering to tame free, monomer radicals. Monomers are molecules that can bind together to form a polymer. Though radicals are useful in forming polymers, they are generally too reactive and short-lived to form the correct shape of polymer that researchers and industries want. The ATRP process uses specific catalysts

to set active monomers into dormant states and uses a reducing agent to let the dormant radical go back to the active stage. In this way, monomers can switch between their active and dormant states and, therefore, have an extended life span. When they were invented in 1995, ATRP methods were expensive and not nearly as

efficient as they are now. Several activator regeneration ATRP methods involving different reducing agents were developed afterwards, including photoinduced ATRP. Matyjaszewski and his team contributed the most towards extending metal-free ATRP into the polymerization of acrylonitrile, which successfully advanced polymer synthesis

and macromolecular engineering. According to www.dreyfus.org, in addition to the development of ATRP, Matyjaszewski also helped transfer the ATRP process to industry, where it has “applications that include automotive coatings, adhesives, cosmetics, inkjet printing, smart and electronic materials, and many others,

with an estimated commercial value exceeding \$20 billion.” In his lecture, Matyjaszewski mentioned several of his research projects, including those involving bottlebrush-structured polymers that have exactly the same topology, or geometric structure, as a regular bottlebrush, a type of shrub with cylindrical flowers. The polymers, which assist in lubricating joints, are made by creating a backbone and then attaching side chains to it. Matyjaszewski also discussed super-soft elastomers that were made from these bottlebrushes. In order to make the material super-soft, it must be gel-like, but approximately 99 percent of water molecules that are usually contained in the gels don’t hold on to each other tightly enough. To combat this issue, the research group replaced the water molecules with polymers. They found that when they dropped an egg from a three story building onto a piece of elastomer material, the egg did not break. Matyjaszewski also mentioned one of his student’s ideas about using polymer escorted passenger-siRNA to treat heterotopic ossification through preventative clinical therapy.

Matyjaszewski described his experience as a researcher in polymers by explaining that his research benefitted from the incorporation of his work with his imagination. “I feel very honored and flattered to receive the Dreyfus Prize for making molecules and materials,” Matyjaszewski said in a university press release. “This recognition addresses not only contributions of my students and collaborators, but also all polymer chemists working in the area of macromolecular materials with controlled architecture and functionality for targeted applications.”

CMU professor named on *Popular Science’s* Brilliant Top 10

NANOPARTICLES, from A9
toxins kill the cancerous cells, but have a lower impact on the rest of the body. Unfortunately, many patients suffer from the toxins and experience grief and pain from their treatment. Nanoparticle drug delivery methods could improve cancer treatments by making the treatment more targeted. Cancerous cells have a unique biological make-up, which includes a different expression of protein ligands on the outside of their cells. Nanoparticles are able to target this

unique external structure by using a lock and key mechanism. In this mechanism, when the nanoparticles travel through the bloodstream, they lock on to the proteins of interest on cancerous cells due to structural similarities between the two. Alternatively, a non-direct, but more complicated, approach involves detecting cells that over or under express certain proteins that cause the cell to develop a disease phenotype. In this method, once locked on the cell, the nanoparticle can deliver a toxin directly to the cell.

“Cancer therapy is so difficult for patients, in large part, because of the toxic side effects of chemotherapy,” Whitehead said in a university press release. “In contrast, our targeted nanoparticles deliver drugs only to cancerous tissue, sparing healthy cells. We expect these targeted treatments to extend the lives of cancer patients while increasing their quality of life through a reduction in side effects.” In a clinical setting, “these methods will not replace current treatments, but could be used in coordination to have a stronger,

more targeted impact,” Whitehead said in an interview with The Tartan. Patients can be exposed to the nanoparticles during chemotherapy treatment to have a dual-faced attack and, hopefully, reduce the number of times a patient has to endure the chemotherapy toxins. Currently the research team is applying the nanoparticles to a variety of diseases ranging from cancer to chronic illnesses. While Whitehead has worked very hard, she gives a lot of credit to her collaborators and research teams. A

major aspect of her research involves working with clinicians at various hospitals, whose input is valuable as it reveals the practical impact these new techniques can have on patients. Whitehead also notes the importance of the students working in her labs. While she is proud of her ability to develop tangible products that could improve people’s lives, she sees the students she trains as another valuable product of her hard work. She wants them to develop the same intuition and passion she carries herself so

that they will continue to develop great things in their own careers. Whitehead has been able to find success early in her scientific career and make significant contributions to the scientific community. She believes the key to her success is that “she just keeps going, persevering towards a goal.” “Science is very hard,” Whitehead said, “and being smart only gets you so far. Almost nothing works the first time you try it, but if you keep your eyes on the prize ... you could change the world.”

DRUE HEINZ
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PRIZE READING

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PUGWASH

Technology has positive and negative effects in education



THATCHER MONTGOMERY
Staffwriter

At Pugwash, our discussions regarding ethics in science and technology can cover a lot of ground. Some of the topics are removed from our day-to-day lives, such as discussions of cryonics or space junk. Other topics have a little more personal involvement, like last week’s regarding technology in the classroom.

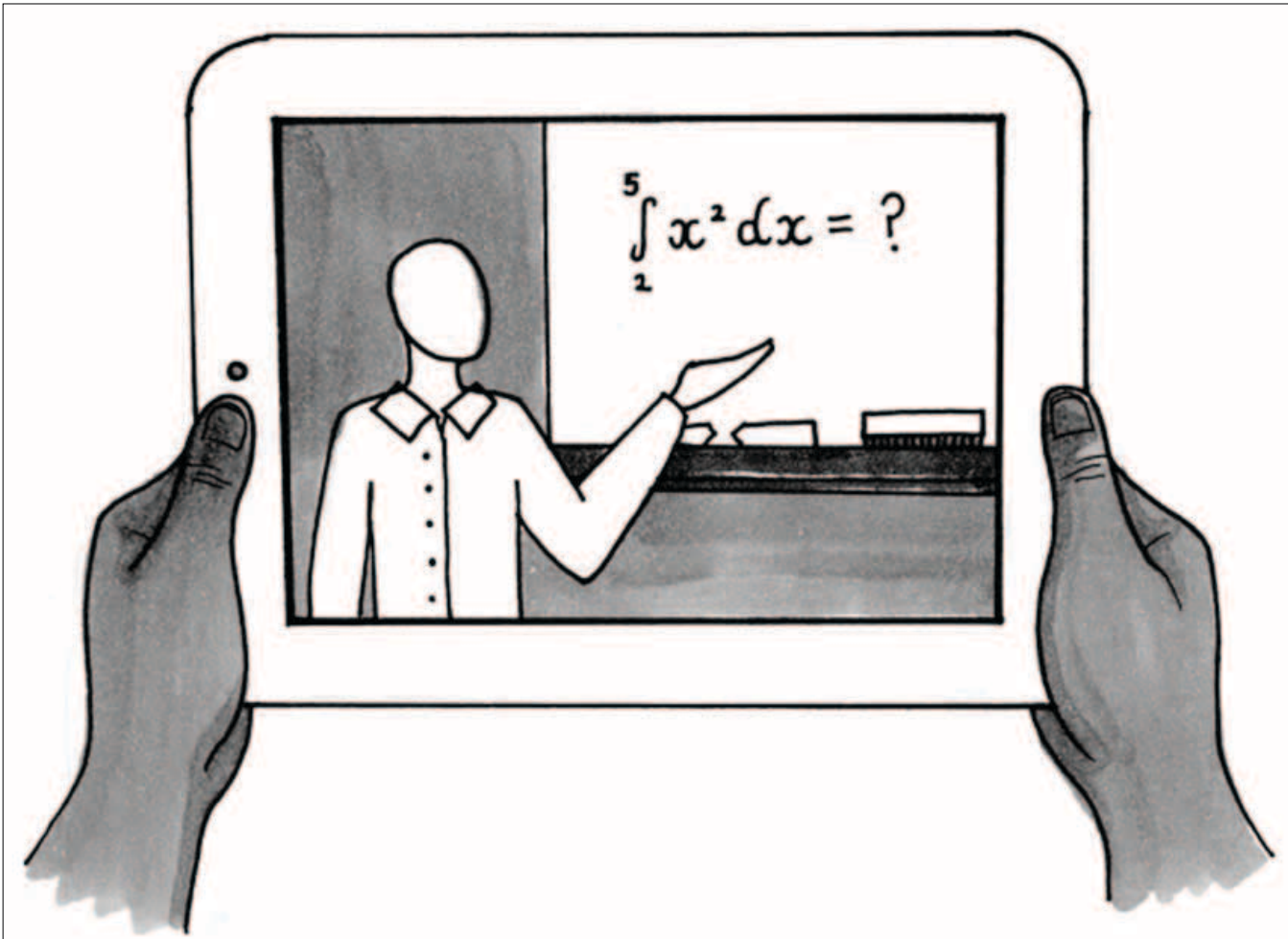
We began talking about the practical problems that come from using technology. Does it work? Does it help learning?

A recent report from the Organisation for Economic Co-operation and Development (OECD) showed that, on aggregate, there was no correlation between increased use of technology and improved test results. This overall data was supported by many personal experiences.

One Pugwash member talked about how their school had received funding for smartboards, which are like a cross between whiteboards, projector screens, and tablets. In their experience, the smartboards offered no better functionality than a regular whiteboard.

Another anecdote was a native Floridian’s experience with a state requirement for an online class. They were disappointed with the class, and said most people saw it as just an excuse to not physically stay in school the entire day. Instead of using the extra time to work on the online class, they went to Chipotle or hung out with friends.

Doing schoolwork online also leads to many other distractions. It can be harder, in some classes, to browse Reddit or Facebook while the teacher is in the room with the students. When students are



Ashley Lai/Junior Staff Artist

on their own, however, distractions are hard to avoid.

One member, an international student from Germany, explained how they had all their lectures recorded online. The idea was for students to be able to go back through the material at their own pace, watching the hard parts repeatedly or the easier parts at twice the normal speed. Because of this, most students end up not going to lecture, because the video was available. However, they also don’t watch the video, because it’s easier to skip it when it’s an “on your own time” activity. The inclusion of technology only makes it easier for students to be lazy.

Many of the American members agreed that if they had the choice to avoid lectures, they probably would. Another German student,

however, countered that we shouldn’t blame the technology for the attitude of the students. This member suggested that some might prefer the videotaped lectures to be available for early classes, because they would rather watch the recording sometime when they’re more awake.

Another point was that the existing technology probably isn’t being used as effectively as it could be, to put it generously. More bluntly, it could be horribly misused. Teachers, textbook producers, and the entire education industry are often being pushed to include more technology “because it’s the future.” Without proper training on how to use the technology, and without research on its effectiveness, including technology for the sake of following a fad can’t be expected to

produce any results. One member’s father works in textbook publishing, and the member said he often recommended not using the software that he was being pushed to include.

However, just because technology is currently being misused doesn’t mean we should give up on it. It can still allow classes to do things in new and different ways, some of which might be effective.

The OECD study looked at the correlation between technology and test scores in aggregate, which means it could be missing both really poor performers and also some really stellar uses of tech. An example was given of how physics classes can now simulate extremely complex processes that would have been hard to represent before computer modeling, or hard

to conceptually grasp without computer visualization.

Approaching the topic from a different angle, one Pugwash member brought up the effect of technology on students from different socioeconomic backgrounds.

This member had worked with low-income students who didn’t have a computer at home, and they had a lot of trouble learning to work with the school computers. Wouldn’t including technology as part of the curriculum tilt the playing field even further against poor students?

That very reason is why technology needs to be included, another member said. If the exposure to computers is started early enough, then the students could learn how to use it at the same rate through the school system. The

Pugwash member continued to say that in addition to regular reading literacy, web or computer literacy should also be a required skill for graduation from the school system. Other participants thought that was a good idea, but maybe a little idealistic, because devoting more time to another standard would have to cut into already small resources.

The last major issue Pugwash addressed was the idea of a classroom where human pupils were instructed solely by robots or smart software. Is the presence of human teachers somehow intrinsically beneficial to learning?

The general consensus was that a human touch was important. More than just information providers, teachers serve as mentors, caregivers, and friends. There’s also something about seeing another human get excited about a subject that a robot just wouldn’t match. One member thought that even though they could be programmed to show excitement, students would still roll their eyes because they knew it would be just a program meant to show that “learning is fun!”

Another point that was brought up was that a person would still be at the other end of the program. Maybe the individual classrooms wouldn’t have a person in them, but a person would have to design the curriculum or set the program in motion. To have a cohesive educational system, some person would have to be in charge.

But what if, as the last commentator of the night suggested, machine learning could do that better than any human?

Student Pugwash is a non-advocacy, educational organization that discusses the implications of science, technology, and medicine on society. This article is a summary of last week’s discussion on the use of technology in education.

Modern television incorporates sophisticated electronics

TELEVISION, from A9

them to scatter across the screen. It is this interaction of electrons and phosphor on the screen that produces a glowing image.

So the CRT creates the image on the screen, but how does a television know what image to produce? An analog television receives two kinds of signals, sounds and pictures, which are typically

received either through an antenna, a cable set, or a satellite dish. The picture signal is transmitted over AM signals, and the sound over FM signals, much like AM and FM radio signals. Inside the television, a demodulator receives the FM signal and converts it into a sound signal, which is then converted to sound through the television’s speakers. As for the video signal, a receiver in

the CRT takes the AM signal and transmits it as an amplification signal in the electron gun. This signal then modifies the intensity of the electron beam, producing the contrast of images that appear on the screen.

Although this type of television was popular for the majority of the twentieth century, and explains why the television is sometimes called “the tube,” CRT televisions

are considered outdated by today’s technological standards. Today’s televisions run on a variety of different technologies, such as the popular liquid-crystal display (LCD). LCD televisions operate in a similar fashion to analog televisions, only instead of using a CRT to beam electrons at a screen it uses cold cathode florescent lamps to beam white light. In order to modify the light’s brightness, LCD

shutters are placed in the television. These shutters open and close to transmit a certain intensity of light over an area of the screen. In order to distill out the desired color of the light, each shutter is paired with a color filter to pull out all but the desired color of the light beam.

Television is a relatively modern invention that has advanced from low-resolution, black-and white images

to high-resolution, richly colored displays. Televisions rely on a signal input as well as some sort of conversion process to translate the signal into the images that we see on our screens. Even newer forms of technology are developing to create a 3-D television, which takes into account depth perception to simulate a three-dimensional feel on a two-dimensional screen. Now that’s televisualary.

Undergraduate Programs Dean's List, Spring 2015

Business Administration

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Class of 2016

Kamal Abdulrazaq, Austin Ahn, Gregory Allen, Ajit Bopalkar, Shannon Burke, Eric Bykowski, Yiqun Cao, Jeffrey Chan, Blake Chasen, Xuanku Chen, Vincent Demarchi, Matthew Dezenzo, Rachel Fowler, Jordan Friedlander, Hodei Garcia Senosiain, Ryan Hung, Sophia Kim, Jae-Ho Koh, Darun Kwak, Audrey Celine Lao, Yeram Lee, Ellen Lim, Angela Liu, Xun Liu, Willa Lu, Elissa Maercklein, Daniel Mannsers, Colin McCullough, Amanda McHenry, Kavita Mehta, Jesse Mendelson, Tiffany Monthe-Siewe, Hamza Nadeem, Avinash Patel, Anita Ramamurthy, Shivanee Shah, Yan Shen, Suruchi Sheth, Wanxuan Shi,

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On behalf of the faculty and staff of the Tepper School of Business, We congratulate the undergraduates and alumni listed here for earning Spring 2015 Dean's List honors.

Dean's Office



Fantasy football lights up

SARAH GUTEKUNST
Operations Manager

This past week was my strongest win to date.

My team put up 84 points for the week, while Team Leandro, who probably auto-drafted and then never edited his lineup, mustered a whopping 28 points.

I finally had a strong set of running backs to start — Le’Veon Bell came back from suspension, and LeGarrette Blount actually scored points. He really broke my heart in week two when he only rushed for four yards in his first appearance of the season, putting up a goose egg on the fantasy scoreboards. Unfortunately, my other running back, dead-to-me Jerick McKinnon, also rushed fewer than 10 yards.

But week three was a completely different story. Even though the Steelers struggled to score against the Ravens, Bell still showed why he was ranked the best overall draft pick of this season, rushing for 62 yards and scoring Pittsburgh’s only touchdown of the night. In the end, he still put 19 points on my board. I expect him to be my saving grace this season.

Blount’s week three fantasy success can be attributed mostly to the absolute failure of the Jaguars. He scored three touchdowns and rushed for 78 yards, coming to a grand total of 26 points for the week. The Patriots have their bye this week, so I’ll have to wait a little while to judge whether or not this was an absolute fluke, but my instincts say yes.

Because I can’t play Blount for week four, I’ll have to bring McKinnon back as a starter, as much as it pains me. Since I’m in a 20-player league, there are surely no quality running backs to be found on waivers. And since my team is basically

a combination of stars and losers, I’m not comfortable letting anyone go in a trade.

Despite my perpetual running back woes, I’m still projected to come out on top this week against the St. Pete Seminoles. Although it’s possible that he has yet to even think about week four because he’s still starting two players with bye weeks. If that’s the case, I’m praying he sleeps past 1 p.m. on Sunday.

I definitely have him beat in terms of quarterbacking. Russell Wilson has been my most consistent player so far this season, and I’m confident that he’ll come through. St. Pete, however, is starting Andrew Luck, who will warm the bench this week because of a shoulder injury. Too bad he didn’t check, because Luck’s backup on the bench is Jameis Winston, who will face off against the Panthers this weekend. The Panthers are proving to be a force to be reckoned with this season, and I’m not sure the Buccaneers will stand a chance. That could have meant big points for St. Pete, but I’m not complaining.

At running back, I expect absolutely nothing from McKinnon, but I’m okay with that for now. Le’Veon Bell had a great performance Thursday night against Baltimore, even though the Steelers eventually suffered that painful defeat in overtime (looking at you Josh Scobee). Bell scored 20 points, which is realistically enough to make up for McKinnon and beat out both of St. Pete’s consistently single-digit-scoring running backs.

I’m starting Pierre Garcon and Nate Washington at wide receiver this week, who have both been consistently putting up between five and 10 points each week. St. Pete has Julio Jones, and, assuming he plays, I don’t expect either of my WRs to outscore him. I just

need them to keep the gap as tight as possible. I also have wide receiver Eric Decker as my flex. He started the season strong but then suffered a knee injury in week two and sat on the bench week three. I’m cautious about his return, but hopeful that he’ll get back to where he was.

After week two I finally dropped wide receiver Nick Toon. As hilarious as his name is, he hasn’t scored a single point all season. In his place, I picked up Ladarius Green, who then got a pretty bad concussion. And now I’m back to where I started, with Jared Cook. He’s really just okay. But for this week I’ll survive because St. Pete is starting Eric Ebron, who is alright but no Gronk.

The Jets D/ST has had a pretty good season so far, and even though they slumped in week three, it isn’t enough to convince me to start my bench D/ST, the Giants. I still expect my Jets to be competitive against his Seahawks, so the defensive match-up should be interesting.

And finally, I have a confusing soft spot for kicker Brian McManus. Ever since his 18 point performance in week one, I’ve just kind of fallen in love. He isn’t even that much better than Nick Folk, who I’ve kept on my bench all season, but he’s my star and I’ll keep starting him unless he gives me a reason not to. Ian Tanaya also recently explained to me that it’s unusual for a team to keep two kickers, so I’m considering dropping Folk in order to fill a gap somewhere else.

After I win this week — which I will — I’ll increase my streak to two wins and stay tied for first place in my league. I’m still pretty confident that as I work out the kinks in my team and my own fantasy understanding, I’ll be a champion.

Mellon College of Science Spring 2015

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NFL prepares for legal battle ahead of blockbuster movie

ZEKE ROSENBERG
Sports Editor

The NFL just recorded its first arrest-free month during the season for the first time in over a decade. Since the players aren’t getting themselves into trouble, maybe now would be a good time to change our focus to the short-comings of the league itself.

Recently the NFL has been on the lobbying trail, preemptively fighting legislation that may come in reaction to *Concussion*, the Will Smith movie set to be released in November.

The movie is set to revolve around chronic traumatic encephalopathy (CTE), a degenerative brain condition. The Department of Veterans Affairs and Boston University jointly conducted a study of 91 deceased NFL players that found 96 percent of their brains showed evidence of CTE.

Player safety has been a

mounting concern for the NFL in recent years, and a big-budget movie could bring the controversy to a head. The NFL has been taking shots from Congress and many others recently, from the controversial name of the NFL franchise in Washington D.C., the Redskins, to repeated instances of domestic violence perpetrated by players followed by wholly inadequate responses from the league. The league will be in very deep trouble, however, if lawmakers decide to go after the game the NFL plays.

The NFL’s response to concussions has basically been to try and eliminate the scariest moments on the field: when a player goes down after a huge hit and doesn’t get back up. Those moments are incredibly uncomfortable to watch on TV and are obvious reminders of the dangers of football. For both reasons, the NFL has incentive to reduce their frequency.

However, research says brain injuries in football — especially CTE — are not all-at-once events, usually coming as the result of a lifetime of blows to the head. The helmet-to-helmet hit bans and bans against hitting a defenseless receiver in football do not prevent this buildup of small moments of trauma.

If Congress takes notice of the NFL’s failed response to head injuries, two things can happen: The first is that Congress can try to legislate meaningful reforms into football. This means shorter and fewer practices, possibly the elimination of the kickoff and punt, and other things Congress can try to think up.

Secondly, Congress can target the NFL’s wallet. Congress has serious sway over the finances of the NFL. Two legal distinctions of the NFL — its not-for-profit status and the antitrust exemption that allows its franchises to work

in lockstep — are what make the NFL a multi-billion-dollar corporation. Being treated as a for-profit or having its franchises broken up so that the financial rules are different for each team could seriously damage the NFL’s brand and, more importantly, its wallet.

The NFL knows that this fight is coming and has prepared accordingly. The league has a full time lobbying apparatus on the ground in Washington already at work. They’re spitting out all the old “this is all sensationalism and the media is a bunch of liars, and we’re angels” sound bytes we always hear every time someone tries to brush an epidemic of degenerative brain disease among employees under the rug.

With Will Smith and his movie shining extra light on the struggles of former NFL players, the NFL better find a way to stop the bleeding. This bit of good news, that

no players have committed crimes for a calendar month, is legitimately good news. It’s somewhat hard to find 1700 people who go an entire month committing a total of zero crimes. However, while we give the players a gold star, it is best not to remember the “F” we have to give the league under the stewardship of commissioner Roger Goodell.

If concussions continue to be a problem and the league just says it cannot find any possible solution, a blockbuster movie-driven Congress might not stop at practice schedules. Without its nonprofit distinction, the NFL will be fine. It relinquished its tax-exempt status in April in what many people believe was an attempt to be more secretive about executive pay.

However, if it loses its antitrust exemption, the large amount of money in football means that the competitive balance in the league could



Courtesy of Staff Sgt. Bradley Lail
Roger Goodell at Super Bowl 43.

be uniformly damaged if the financial rules become lopsided, leading to the destruction of football as we currently know it.

SPORTS BRIEFS

Football

The Carnegie Mellon football team lost to Westminster College 26–16 on Saturday. The loss drops the Tartans to 1–3 for the season.

The Tartans forced four turnovers: an interception by junior defensive back Samer Abdelmoty, another by senior cornerback Ryan Aitken, a fumbled punt forced by junior half back Zach Cree and recovered by sophomore cornerback Jacob Johnson, and an Aitken-forced fumble recovered by junior defensive end Jack Fagan. Sophomore running back Sam Benger totaled 83 rushing yards and a touchdown, and senior quarterback Andrew Hearon got 133 passing yards and a touchdown.

The Tartans will return to action against Bethany College on Saturday, Oct. 10.

Men’s Soccer

On Tuesday, the Carnegie Mellon men’s soccer team defeated Allegheny College 3–0. Senior forward Stefan Dasbach recorded all the goals of the day, his career-best. Senior goalkeeper Eric Bykowski led the Tartans defense to their fifth shutout of the season.

On Saturday, the Tartans lost in the first University Athletic Association (UAA) match of the season, falling to Brandeis University 4–2. Junior midfielder Devin Keane and first-year midfielder Zack Masciopinto scored the only goals for the Tartans in the losing effort. With the loss, the Tartans fell to 7–2–1 overall and 0–1 in UAA play.

The Tartans will next play against New York University on Saturday, Oct. 10.

Women’s Soccer

The Carnegie Mellon women’s soccer team opened up UAA play against Brandeis University, winning 2–0 and remaining undefeated this season. The Tartans improved to 9–0–1 for the season.

Sophomore midfielder Tori Iatarola earned the first goal for the Tartans off a free kick attempt. Senior midfielder Louisa Pendergast converted a penalty kick attempt into the Tartans’ second goal of the game. Junior goalkeeper Katie Liston returned to the field for the first time since Sept. 5, notching six saves in the Tartans’ sixth shutout of the season.

The Tartans will next compete against New York University on Saturday, Oct. 10.

Women’s Golf

The Carnegie Mellon women’s golf team finished the 2015 Allegheny College Invitational fifth out of nine teams. The team recorded a team score of 719.

Sophomore Summer Kitahara led the Tartans with a score of 164 to place sixth individually. Senior Yoon Hee Ha finished with a score of 183. First-year Carly Jordan finished with a score of 188. Sophomore Emma Hoskins earned a score of 194 while fellow sophomore Ginger Glass ended the invitational with a score of 208.

The Tartans will next compete at the Generals Invitational on Monday, Oct. 5 and Tuesday, Oct. 6.

Women’s Volleyball

The Carnegie Mellon women’s volleyball team opened UAA play at the first UAA Round Robin hosted by New York University.

In the first match on Saturday, the Tartans took on Brandeis University, winning 25–13, 25–15, 25–19. First-year right setter Sarah Jurgens led the team with eight kills while first-year outside hitter and defensive specialist Lauren Mueller totaled six.

The second Saturday match saw the Tartans fall to Case Western Reserve, losing by 25–22, 25–19, 25–16. Sophomore middle blocker Eliza Donahue led the effort with eight kills while Jurgens had seven.

On Sunday, the Tartans lost to Emory 25–19, 25–13, 25–13. Donahue totaled nine kills while Jurgens earned six.

The Tartans dropped to 19–4 for the season.

The Tartans will next play on Saturday, Oct. 17 at the second UAA Round Robin, which will be hosted by Case Western Reserve.

Compiled By
IAN TANAYA



Brandon Hong/Staff Photographer
Sophomore outside hitter Hannah Wooten sets up a Tartan attack.

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Sports

Kontor is cool in the clutch

ALEX WOOD
Junior Staffwriter

She may only be halfway through her college career, but sophomore midfielder Morgan Kontor believes she is becoming a quiet leader on her team. She exemplifies how to be a clutch player for her team when the time comes.

The materials science & engineering and biomedical engineering double major from Annapolis, Md. most recently scored an incredible game-tying goal in the waning seconds of a game against Capital on Sunday, Sept. 27. She headed a beautiful pass from her teammate, sophomore midfielder Haili Adams, into the top of the goal, forcing the game into overtime and ultimately securing her team the win. The victory continued their impressive undefeated streak.

Kontor did not get to this moment of success without a lifetime of commitment to the game. She first stepped foot onto the pitch in a neighborhood recreational league at the age of five and never looked back.

She eventually moved on to playing for her high school and the Maryland United FC before making her journey to Carnegie Mellon. Kontor knew she had to step her game up when she came into the collegiate atmosphere. “Everyone is good, the game is always faster and the teams play better together”, Kontor said of the transition to collegiate athletics. However, with her sophomore class constituting a large chunk of the team, she feels that her team is as cohesive as ever and sees even better opportunities for success emerging in the future for her team. When she came to the school, her favorite part of joining the soccer program was the friends she immediately made through her teammates, creating a truly “authentic family” within the team, which is clearly reflected in their outstanding undefeat-

ed record this season.

But not every game has been an easy victory, and her game-tying goal against Capital is the epitome of Kontor’s success so far at Carnegie Mellon. Kontor recalls the moment vividly: As the final minute of the game ticked away, she remembers thinking, “There’s no way we’ll make it through this with a win,” her team being down a goal and no immediate solution in sight. The seconds continued to tick away, and Kontor’s teammate Haili Adams miraculously dribbled through four defenders and got a beautiful pass off in Kontor’s direction. The next few seconds became a blur of movement and adrenaline for Kontor. “I just got something on it,” she said, “I can’t recall whether it was my head or my shoulder but I got a touch and I knew it went in.” The team erupted in celebration, but the happiness quickly reverted to business because the game was not over — the goal had only been enough to tie the game for the Tartans.

Kontor saw things differently. “We had to win at that point. That was only way it could happen after that goal,” she said. And she was right. The Tartans managed to score an overtime goal and take the victory to continue their undefeated season on the wings of Kontor’s game-tying goal.

Kontor remains humble about the game, though. “I was just doing what I needed to, being in the right place at the right time” she said, and she knows it was a collective



Kontor's efforts late in the game revive hope for the team, sending the game into overtime and a Tartan win. Courtesy of CMU Athletics

Ventura goes to Penguins

ZEKE ROSENBERG
Sports Editor

In the spring, Carnegie Mellon Ph.D. and junior faculty member Sam Ventura took a consulting job with the Pittsburgh Penguins. His path there is exemplary as a Carnegie Mellon success story. He started as a hockey fan and eventually, through working with former Carnegie Mellon statistics professor Andrew Thomas, turned that interest into being employed at the highest level of the sport.

Ventura’s rise to the Penguins began with hockey statistics site War-on-ice, a site he created with Thomas. “Andrew and I first started talking about hockey when he taught [a] sports statistics class,” said Ventura, referring to a mini course offered by Thomas in Ventura’s senior year.

Sports statistics have a long history, but until recently, as Ventura pointed out, many methods are not sufficient to tell the story of what occurs on the ice. “We were talking about how existing methods to rate players offensively and especially defensively were lacking.”

From those conversations emerged War-on-ice, which became the most well-known and comprehensive database for hockey statistics on the web.

Ventura and Thomas started by downloading the NHL’s play-by-play files and logging not just goals and assists but also things like takeaways, blocked shots, and the location of the puck during each of the events.

Through all of the infor-

mation, the two created “a set of metrics that would provide a statistical rating for players offensively and defensively,” according to Ventura. That statistical rating became what many believe is hockey’s most powerful tool for evaluating players.

The metric measures the change in a team’s goal scoring rate when a player is on the ice for offensive rating. For defensive rating, it measures the rate of goals conceded by a player’s team when that player is on the ice. It controls for factors like “score state... and also which players they’re on the ice with... and which players they are playing against.” The paper describing the method was published in The Annals of Applied Statistics.

The site’s expansion began when Thomas organized a hockey analytics panel at the Joint Statistical Meetings in 2014. Michael Schuckers, Brian McDonald, Kevin Mongeon, and Mike Lopez — some of the foremost minds in hockey analytics — joined Ventura, and Thomas discussed hockey analytics on the panel. “There was a lot of question and answer from the audience and the question that eventually came up was, ‘If what you’re doing is so great... then why does nobody use it?’ ... and we realized we weren’t doing a very good job of marketing what we had done,” Ventura said.

At the same time — maybe even the same day, according to Ventura’s memory — the person who ran the leading hockey analytics website, Extra Skater, was hired for a

effort of her teammates to make that goal happen. She said her teammates trust each other, and she was impressed “by the amount of resilience my team showed in staying in that game.” But Kontor, along with the rest of the Tartan women, are looking forward. The ultimate goal is to make it far into the NCAA tournament and possibly win, she says, but the team isn’t focused on that right now. Kontor says the first goal is to win the next game, and after that to win the UAA conference.

If they take their goals step by step, she says, the ultimate goal will come easily.

Success for a Carnegie Mellon athlete, however, must come in both academic and athletic forms. When asked about how she balances schoolwork and athletics, Kontor said she resorts to simple time management strategies, and emphasized that she gets enough sleep at all times. She also sees her sport as a stress relief mechanism, allowing her to get her mind off school when perhaps the thought might be too overwhelming. Kontor is still figuring out what she wants to do when she graduates, but says she would like to become a coach of her own soccer team one day. But for now, her team will look to continue running the table, and with great team synergy and trust among everyone, it looks as if the Tartan women are on track for a perfect season.

Kontor knows she’s the clutch player, and wants to be along for that ride.

Bykowsky defines defense



Bykowsky is a critical part of the men’s soccer team. Courtesy of CMU Athletics

IAN TANAYA
Assistant Sports Editor

The Carnegie Mellon men’s soccer team has gotten off to an incredible 7–2–1 start. Senior goalkeeper Eric Bykowsky has been a critical part of the effort, having led the defense to five shutouts this season.

The business administration major from Columbia, SC hasn’t always been a goalie. “My parents got me into soccer when I was four, and I kept playing all the way up through high school,” Bykowsky said, recalling the twisting path he took to get to this point. “I started off as an attacker, but they figured out I wasn’t fast enough.”

As the speed of the game got faster, Bykowsky needed to make a switch in position. “When I was midfielder, I had the endurance, but they figured out I didn’t have the foot skills. They moved me to defender, where I didn’t even have enough skills for that.” Despite the constant shifting out of roles, Bykowsky remained optimistic about staying on the team and playing. “Coach put me in goalie for a game, and I ended up starting.”

Though Bykowsky played for the school team during his years in elementary, middle, and high schools, he con-

sidered club soccer the true competition where he was forged in fire. “I had a coach who really pushed me, and the hard work I put into it really prepared me for success in college.”

The time he put into soccer helped him utilize his time outside the sport efficiently. Undoubtedly, his investment into the sport would pay off. “We won the regional championship my senior year, and we beat a couple of top teams in nationals before we lost to Michigan.”

Bykowsky believed that coming to Carnegie Mellon would be a great opportunity. “I knew I wanted to go into business, and I wanted to play soccer in college. I figured since Carnegie Mellon was top 10 in business that I’d be a perfect fit here,” said Bykowsky. Though Bykowsky became quickly introduced to the challenge of balancing his course load and his time with the team, he thrived under these constraints.

“The interesting thing about fall sports is that you’re coming in at the most stressful time for you. The time commitment for soccer is like adding three extra classes to your schedule. What it did for me was make me keep a schedule and get work done ahead of time. I actually did

Alla leads tennis to victory



Alla has become a leader for the men’s tennis team. Courtesy of CMU Athletics

JORDAN SAFER
Junior Staffwriter

A leader on the Carnegie Mellon men’s tennis team, senior Abishek Alla feels that playing for the tennis team gives him an outlet for competition outside of the class. The civil and environmental engineering major from Hyderabad, India has showcased dominant play over the last couple years, competed as the Tartan’s number one singles player for the past two seasons, and been named an All-American in singles both years.

When discussing his choice to participate with the team, he called attention to the break tennis provides from a day full of academic activities. Alla embraces his participation in tennis for the sheer enjoyment of being on top of the sport’s competition.

“I’m playing more seriously only because that’s a release from academics and it’s more to fun to be on the court than to be somewhere else,” said Alla.

In high school, Alla competed at a sports academy where athletics was a focus. Coming to Carnegie Mellon

was a big change, but luckily he made the adjustment successfully.

“I came in prepared for [school] to be harder and then I guess it started going off well the first few weeks, and then it just kept going that way.”

Entering school at Carnegie Mellon poses challenges for many first-year students unfamiliar with the workload, and Alla noted that this makes it especially difficult for athletes at the university to balance their time well.

Late in the season, he pointed out, there is importance in “staying on top of all the academics so it doesn’t affect the playing in UAAs [the University Athletics Association Conference Championships].”

However, he also observed that the impact of sports can be a great positive force on the athletes in season. When in season, athletes learn to do work efficiently for their classes, using time outside of practice better while operating under the added time pressure.

“I couldn’t see myself not playing. If I wasn’t playing tennis I feel like I’d have a lot of free time,” Alla said. Alla explained that since tennis teaches the players about “unconsciously finishing work,” when they aren’t playing; there is a lot of free time.

This makes a good lesson for the younger athletes, since, Alla said, the younger members of the team are still learning to manage the different academic load and find balance with other activities. Alla sees losing sleep as the big pitfall to a student athlete looking to succeed in school and in tennis.

He advises that “if you’re spending too much time on a problem you should just go to the TA [teaching assistant] and ask for help or just email

better in fall than spring academically. Try to explore as many opportunities as possible, don’t be afraid of a full schedule because it can keep you disciplined.”

Bykowsky has managed to maintain a strong commitment to academics and a strong commitment to the team. Though many aspects of the team have changed over the years, he believes that the team can go far.

“High level stuff changed about the club. We just had a new coach come in last year, and that was by far the biggest change we’ve seen in the program. We’ve got a fresh set of tactics and are playing cleaner soccer. There’s been a lot more discipline in the team, and we’re more accountable on and off the field. This year, we’re right where we need to be in the coaching transition, and our freshman class is the strongest we’ve had in the past four years. I’m very optimistic for this year.”

The Tartans’ great start has certainly seen just how well the changes have resonated with the team. The first game of the season against Muskingum University was the first chance to show their competition what the new team was made of, and the resounding 8-0 victory kicked off the season with a bang.

The Tartans have been able to thrive against strong competition, including a 4-3 victory against the then-number three ranked Messiah College. Though the road ahead will continue to provide challenges for the team, the performances so far given by Bykowsky and the team indicate that they are ready to take on anyone.

The final season for the senior goalkeeper will certainly be one to remember.

someone instead of staying up for 12 hours doing it on your own.”

Successfully adjusting to the academic workload will be key for the tennis team this season, with a strong first-year presence on the team that’s sure to be large part of the winning formula.

Alla explains that a strong work ethic from the first-years on the team this season is making up for the loss of three of last years seniors from the varsity team and giving the team a chance to “make history.”

Alla views this weekend’s upcoming ITA regional tournament in Fredericksburg Virginia as a good test of how both he and the team stack up competitively against the competition. In the singles tournament, he expects strong competition, both with rival tennis players, like a strong player from John’s Hopkins University who Alla believes is likely to take the top seed in the draw, and with teammates. He anticipates many of the tough matches to come against other strong Carnegie Mellon tennis players who will also play in the tournament.

In addition to being able to cope with added academic responsibility, Alla explains the significance of the coaching staff in allowing the tennis players from both the men’s and women’s teams to train efficiently through the season. The tennis coaching staff must deal with limited court openings throughout the day, needing to organize times for all athletes on both tennis teams to take advantage of the courts closed to public use during the day.

On the whole, Alla’s experience handling tennis along with a typical student workload helps him succeed both on and off the court.





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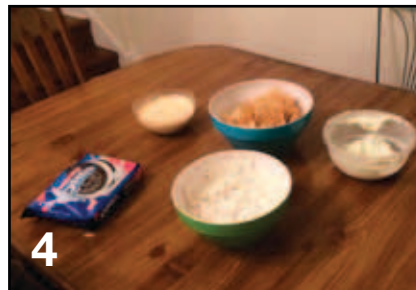
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Trevor Noah shows his chops

New host of *The Daily Show* not quite as wry as Jon Stewart

Last week, *The Daily Show* returned after a two-month hiatus to continue the “war on bullshit.” New host Trevor Noah, replacing longtime captain Jon Stewart, who departed the show in August after 17 years, immediately acknowledged that he had big shoes to fill. “I can only assume this is as strange for you as it is for me,” said the South Africa native. “Jon Stewart was more than just a late-night host. He was often our voice, our refuge, and in many ways our political dad. And it’s weird, because Dad’s left, and there’s a new stepdad. And he’s black. Which is not ideal.”

Many small details about the show have changed, including the logo and graphics, but much of it remains the same. The format, structure, and theme song remain, as well as some familiar correspondents including Jordan Klepper and Hasan Minhaj, and the always-fantastic “Moment of Zen” to close the show. The segments are still hilarious puns, and the targetboard is familiar. The structure of the script is so similar you can almost hear Stewart doing the show in your head.

There’s no doubt, however, that this is a different show, and that’s felt in Noah.

He’s got an incredibly charming smile that stretches from ear to ear, and it combined with his demeanor presents an image of a boy shoved into the spotlight; he wouldn’t want to be anywhere else but at the same time can’t wait for it to be over. There’s a certain sense of discomfort in the first few episodes, and Noah handles some elements of the show as if he’s not quite comfortable in his surroundings.



Courtesy of Flickr Creative Commons

For example, his interview with New Jersey Governor Chris Christie on last Wednesday’s episode felt too much like a stump for the Republican presidential candidate to shout from, compared to what fans expect from *The Daily Show*. The topic focused on Christie’s plan to implement a thumbprint system to document and control immigration, and where Stewart would’ve certainly had a few opinions of his own on the issue, Noah stood back, smiled politely, and asked questions that gave Christie control. Hopefully Noah grows comfortable enough in his new role to treat his guests with a little bit less than perfect hospitality.

With Jon Stewart’s departure and Stephen Colbert’s recent move as David Letterman’s replacement on *The Late Show*, it appears that Comedy Central’s late night programming has entered a new era. Stewart and Colbert established themselves as the smart alecks throwing spitballs in the back of the room, an intelligent alternative to the big network late night shows that vanilla-up their jokes to appeal to a wide audience (an establishment Colbert has now joined). Now, *The Daily Show with Trevor Noah* and its timeslot chaser *The Nightly Show with Larry Wilmore*, essentially have to start over again. Hopefully as the writing staff grows more familiar with their new host, Noah will stop feeling like a replacement stepdad and become more like the dad Stewart was. Because the “war on bullshit” must continue, or else we’ll become lost in a sea of fear-mongering, and politicians will go without hilarious nicknames. We can’t have that.

The Daily Show airs weeknights on Comedy Central at 11 p.m. Episodes are posted on cc.com the next day for free.

Joey Peiser | Contributing Editor

New host of *The Daily Show* and South Africa native Trevor Noah generates many laughs but approaches his new role with some trepidation.

Advice for awkward people

About being exiled from the hearts of parents

Hi, Josh!

My parents don't love me any more. I'm from Arizona, but I have been living out here in Pittsburgh since I started college (I'm a sophomore, by the way). I went home this week to surprise my parents for their anniversary, and when I got to my house, I found that nobody was home and all of the locks had been changed, so I waited outside for my parents to get home.

When a car pulled into the driveway, I ran up to greet my parents, but the people who stepped out of the car weren't them. They were an older couple. I explained that this was my house, and they just laughed and told me that they were renting from my parents. They let me in to see the house, and the couple told me that my parents had turned my bedroom into a sewing room and clutter repository. Long story short, my parents are living in Vermont during the fall and renting the house out until I come home for Christmas, and they didn't tell me, and they messed up my room, and they hid all of my stuff in the basement under a pile of old quilts, and they're acting like what we had in that house didn't mean anything to them. Those walls have seen some stuff, Josh.

The Rodriguezes don't know the history; they don't know about the time I wrote emotional song lyrics above my bed with permanent marker when

I was going through my scene phase. They just sew their charity blankets for the under-privileged elderly in ignorance.

Tl;dr, how do I get my parents to let me into their lives and tell me things and love me again?

Signed,

Sorely Alienated Daughter, Staunchly Anti-Change Kid

Dear SAD SACK,

I'm sorry your parents didn't tell you that they were renting out the house, but maybe they didn't tell you because they thought you'd be upset. The fact that they come back for Christmas is evidence of their love for you (and the bone-chilling, icy horror characteristic of New England winters). It's not that they don't love you, but maybe that they're free to relocate for a few months while you're busy at school. I'm sure that your parents didn't mean any harm in keeping the Rodriguezes' existence from you. I've also struggled with the change of my old room into a guest room, but that's just the natural progression of life after a kid goes off to college. In my opinion, you should call your parents and talk through this with them — I'm sure that will settle the issue and put your mind at ease.

Sincerely,
Joshua Brown.

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

Impress friends with delicious snack dip

Try these easy, cheap, and crowd-pleasing accompaniments for your party food

I'm of the firm belief that a solid offering of snacks has the potential to elevate an awkward red Solo cup "rager" to a nice cozy evening with friends. That's why when I throw a party, I like to put out some noms. It shows friends that you care about their experience in your home, and it's always good to put food in the tummies of the people who hold the fate of your furniture in their hands.

An assortment of dips is a really great way to feed guests. It's more effort than simply putting out a few bags of chips, but it's way more delicious. A simple Pinterest search is enough to show you the mouth-watering range of dips out there, from savory to sweet, from a simple three-ingredient delight to a complicated layered delicacy, depending on your budget and time constraints.

But with these three dips that I made for my birthday party, I didn't have to spend that much money and I pulled them all together in the hour before the party began. They were super delicious and very easy! I opted for all savory because that's what I like to eat, and it was my party. It was also great that all of them were served with tortilla chips, so that made life simple.

The first is an avocado dip that's actually *not* guacamole. It's a creamier spin on the universally adored classic. By adding cream cheese and sour cream, it fluffs up the dip and gives it a deeper flavor. Plus, that's volume that doesn't come from avocados, and that equals money saved! Unfortunately the avocados that I bought were horrifically underripe, so I have faith that this recipe will yield something better than what I made.

Avocado Party Dip

8 ounces of cream cheese
8 ounces of sour cream
½ teaspoon of garlic salt
1 ripe large avocado or 2 small ones, pitted and peeled
¼ cup of chopped red onion
1 tablespoon of lemon or lime juice

This recipe is much easier if you have an electric mixer, which I do thanks to my beautiful grandmother. If you don't, I'm so sorry because the first step, creaming the cream cheese, requires serious shoulder and tricep muscles to do by hand. Follow that up by mixing in the sour cream and garlic powder and don't stop until it's fluffy. Then beat in the avocado until it's combined with the creamy love pillow. Finally, hand

stir the onions and lime juice. I personally chose to stir in a couple teaspoons of salt too, but you can do that to taste.

Cheesy Beer Dip

12 ounces of beer
8 ounces of cream cheese
1 cup of shredded cheddar

Buzzfeed recommended using Corona, but I happened to already have some really high quality month-old Keystone Light on hand. The dip still turned out delicious in spite of it. Start by bringing the beer to a simmer over medium heat in a small sauce pan. It will get really fun and foamy, and that's how you know it's time to add the cream cheese. The best way to go about this is to soften the cream cheese beforehand, and cut it up into chunks so that it melts smoothly. Once that's melted and mixed up, pour in the cheddar and stir until it's a dip. If you're feeling fancy, which I was not, a sprinkling of chopped green onions would be a delicious finishing touch.

The only small issue with this one is that it's not ideal for leaving out on a table all night. It's so delicious hot, but so weird and congealed after two hours. Either serve it immediately, serve it in a crock pot, or periodically microwave it.

Best for last... Fiesta Ranch Dip

1 packet of Hidden Valley ranch seasoning mix
16 ounces of sour cream

10 ounce can of Rotel Original (tomatoes and green chiles)
11 ounce can of corn (I used a can that had a mix of yellow and sweet corn)
¾ cup of shredded cheese

Pour everything in a bowl and stir! It's literally as easy as that, adding to my sincere love for this dip. It was also the first one to completely disappear, much to my despair. I need to add that I could truly eat this for breakfast, lunch, mid-afternoon snack, dinner, and late-night snack until my digestive system fails. It was to die for in every way. The mixture of the ranch seasoning with the acidity of the tomatoes, the sweetness of the corn and general perfection of cheddar hit all my sweet spots. The only thing that could have made it better was maybe some ground beef, which I will likely try as early as tonight because the craving is overwhelming.

I also ended up adding a box of Oreos to the mix, just in case any guests came with a sweet tooth. The whole spread made the evening so much nicer than it could have been without, and everyone who came did express their appreciation. Seeing friends leave happy is a beautiful birthday gift in itself.

Sarah Gutekunst | Operations Manager



Sarah Gutekunst | Operations Manager



Warm yourself with autumnal comfort food

As the cold weather quickly approaches, delicious meals await with seasonal ingredients

Sure, barbecues are fun and snow cones are delicious, but the best season for food is definitely autumn. It's easy to feel a little down when the days become cold and rainy, and when every time you come home you have to throw your socks in the dryer, but a bad day can quickly become a good one with delicious food. Here are a few easy recipes to include in a warm meal filled with comfort food to turn around a miserable homework-filled day.

I love soup more than I love people. Most of the time. Soup is often easy to make and it can last you a while. I fell in love with this soup after eating a variation of it at Eat Unique last fall. While the first few times were only okay, I eventually mastered this recipe and now make it as often as I can.

Pumpkin Pear Bisque

2 leeks, sliced
1 sweet onion, chopped
2 tbsp butter
3 tbsp flour
4 cups chicken broth
15 oz. pumpkin (canned)
2 tsp vanilla extract
1/4 tsp salt
1/4 tsp pepper
1/4 tsp ground nutmeg
3 canned pear halves
1 cup pear syrup, from can
1/2 cup light cream

Lula's additions: 2 fresh pears, 3/4 cup sugar, 1 qt apple cider

I originally found this recipe on *Food.com*, but I make some alterations to the ingredients above. I'm a little

more generous with salt and pepper, and I'm more conservative with the nutmeg — especially after a nutmeg overload, which was not delicious. I also use fresh pears, because I feel like they'd be tastier. I try to buy them as ripe as I can find. While this leads to no pear syrup, I poach the pears in apple cider to give them a bit of an extra fall flair. Then I use a little apple cider, a half cup or so, as the "pear syrup."

First, melt the butter with the leeks and onions in a big saucepan. When they are nearly cooked, add the flour for just a minute or so, and then add all the chicken broth. Cook on medium heat for a while, until the broth begins to boil. Add in the pumpkin, vanilla, salt, pepper, and nutmeg. When the soup begins to boil again, turn down the heat and cover for about 20 minutes. While it is simmering, poach the pears. This means dissolving the sugar into the apple cider in the pan, adding the pears — I do three to four halves — and then cooking at a low boil for about another 20 minutes. Since this is the same amount of time as the soup itself, it is good to already have the sugar and apple cider heating on a back burner.

When the pears are tender, transfer them to the soup. I also add about half a cup of the apple cider. It is easiest to blend the soup if you own a hand blender, but you can also put it in a food processor or blender in four different batches. After it is blended to a smooth consistency, add the cream and a little more vanilla, as well as more salt and pepper if desired.

Enjoy your soup! This recipe can feed generous portions to around four people, so invite your friends over and feel less alone.

Fall is also apple season, one of the best fruits to grace the earth. While this dessert tastes best after you make

it after a long day of apple picking, you can also make it using store bought apples. Apple crumble is one of the best things to make, because it is really, really difficult to mess up. Crumble of any consistency tastes great, and the more butter used, the tastier it seems. So while I give measurements here, I usually just mush it around until it feels right, and I have yet to be disappointed.

Apple Crumble

5-7 apples, depending on apple size
1 1/4 cup oatmeal
1 cup flour
8 tbsp butter
1 1/2 tsp cinnamon
1 lemon, juice
1/2 cup packed brown sugar
1/4 cup white sugar
2 tbsp flour (additional)
pinch of salt
(modified from *foodnetwork.com*)

Preheat the oven to 350 degrees F. The first task after that is the most boring: peeling and chopping the apples. Try to have a vegetable peeler on hand; it is so much easier than a knife. Put the apples in 9x13 baking dish; Pyrex is by far the best. Toss the apples with the white sugar, 1/2 teaspoon of the cinnamon, the juice from the lemon, and the flour. Put the wonderful smelling apple compote aside.

In another bowl, mix the butter, one cup flour, oatmeal, brown sugar, one teaspoon cinnamon, and pinch of salt. It is most effective if the butter is thoroughly thawed, and if you use your fingers. When the mixture is the consistency you desire — reminder: it will be delicious regardless — sprinkle or spread it on top of the apple mixture. Pop the tray in the oven for about 45 minutes, or until it is bubbly and sweet-smelling. Serve with vanilla ice cream if you so desire.

With these two recipes, hopefully you can improve a chilly fall day. Other fun recipes to join your soup and apple dessert might be gooey homemade mac & cheese, kale and white bean ragout, and maybe freshly baked banana bread.

Lula Beresford | Pillbox Editor



Courtesy of Flickr Creative Commons

Warm apple crumble is an easy and delicious way to get your fruit serving for the day, albeit with a side of butter.

Matt Damon delivers emotional performance

Blockbuster *The Martian* a fascinating, captivating, and overly earnest space survival story

For a sci-fi movie about a lone survivor on a desert planet, *The Martian* is a decidedly atypical movie for director Ridley Scott, one of the original sci-fi auteurs. Scott's greatest works, such as *Alien* and *Blade Runner*, are bleak, dystopian meditations on the fragility of humanity against the uncertain backdrop of the future. With *The Martian*, Scott swings the opposite way — utopian storytelling. *The Martian* is a celebration of human ingenuity and unwavering determination in the face of seemingly insurmountable odds.

In the near future, a manned mission to Mars is prematurely terminated when a massive dust storm hits the mission base. In the confusion of the moment, crew member Mark Watney (played by Matt Damon) is injured and presumed dead. Watney wakes up, stranded on desolate Mars all by himself, after the rest of his crew blasted off into space on their return voyage. He must figure out how to make contact with NASA, and how to make his supplies, originally meant to last weeks, last him years. As Watney remarks, he needs to “science the shit out of this” if he has any hope of surviving.

For a movie with a theme best described as “Robinson Crusoe meets Apollo 13,” *The Martian* is unexpectedly upbeat. Scott never lets his audience lose track of the gravity of the situation; yet, he infuses his settings with subtle humor at just the right moments, presenting

Watney not as a tortured soul, but as someone in on the wry joke of just how much trouble he's in. Watney is an idealized symbol of perseverance and ingenuity: He refuses to give in, and somehow, by hook or crook, always manages to find a way. He recycles his own waste to fertilize potatoes, burns rocket fuel to create water, and, in general, manages to get by until the next inevitable disaster (Martian frost, chemical explosions) upends his plans.

Matt Damon as Watney is near perfect. He carries the entire first half of the film by himself. Giving his best performance since Scorsese's *The Departed*, Damon loses himself in Mark Watney, fluidly switching from fear to anguish, from loneliness to determination, and eventually joy. He makes Watney's emotional highs and lows relatable in a scenario that none of us have ever been in. The rest of the cast, an A-list cast if there ever was one, including Jessica Chastain, Jeff Daniels, Chiwetel Ejiofor, Sean Bean, and Kate Mara — work well together as a foil to Damon's solitude. Besides Damon, Jessica Chastain deserves special mention for the poignancy she brings to her role as the mission commander who makes the difficult decision to leave Mark Watney behind and then ultimately must live with her decision when she learns that he is still alive.

Most interestingly, *The Martian* works as a paean to NASA and space exploration. This is particularly ironic

when one considers that the movie is about a mission in space gone horribly wrong. The guys at NASA on Earth and Watney on Mars react exemplarily — innovative and bold, they bend technology and nature to their will to get Watney back. The scenes on Earth could so easily have devolved into a bunch of brains spouting pseudo-scientific jargon without any soul, or into heavy handed *Armageddon*-style trite heroics that cater to the audience of lowest common denominators.

Instead, they manage to straddle a fine line between seeming scientifically accurate and asking really big human questions of the cast and the audience. How much should the returning crew know about Watney's condition? On the one hand, they deserve to know that he is alive; on the other, the last thing a crew needs is the emotional distress of knowing that they inadvertently marooned one of their own — especially since they still have to get back to Earth, in a situation where the smallest mistake can cost everyone their lives. Should the head of NASA, played by Jeff Daniels, authorize an emergency mission with a low probability of success to return to Mars in an attempt to save Watney?

The Martian isn't perfect, but it is undoubtedly a triumph. The story is a bit too linear, everyone is a bit too well-intentioned, and the optimism and constant wisecracking is a bit too unrealistic considering the circumstances. And yet, from the sound design to the visuals to watching the problem-solving unfold, everything just seems to work. Every soaring aerial shot of the desolate Martian landscape is complemented by the intimate landscape of a face. The movie manages to strike this incredibly delicate balance between cold hard logic and raw emotion — kind of like space exploration itself, right?

Abhishek Tayal | Staffwriter



Courtesy of Wikimedia Commons

Matt Damon expertly plays Mark Watney, a member of an expedition to Mars who gets left alone on the planet.



Learn about exciting Hollywood rumors

Studio executives comment on the future of the superhero genre, other movie news abounds

Marvel President Kevin Feige comments on superhero films

Marvel President Kevin Feige is a special kind of movie producer. Producers know how to talk to the press, what to say, what not to say, and when to say it. They know which actors to talk to, who their agents are, how much to pay them, how long to pay them for, what their costumes should look like and where the story should go. So what makes Feige different? Most producers are not recognized by name. Marvel fans know who Kevin Feige is and understand that the Marvel Cinematic Universe was born and raised inside his head. We're now twelve films deep in the Marvel Comic Universe (MCU), and Feige is still revealing his thoughts in spectacular fashion.

In an interview with IGN, Feige spoke to some comments made about superhero films — “that they would soon go by the way of the Western” — and the future of the MCU. Feige said: “ ... the Western lasted 40-50 years, and they still pop up occasionally. It's been, what, eight years since Iron Man 1, if we count that, which I do, as the beginning of our MCU? Maybe [the superhero genre] will only last another 42 years.”

He added: “ ... I still believe the same thing, which is as long as the ones that we can control are as good as they can be, that's all that I care about. I think we've been doing pretty well. I'm very confident in the films we've announced that we have coming forward that they're going to be surprising and different and unique. I've said a lot; I don't believe in the comic book genre. I don't believe in the superhero genre. I believe that each of our films can be very different.”

Feige's comments make perfect sense when we take a look back into history. For example, Feige hired director James Gunn to spearhead 2014's summer hit *Guardians of the Galaxy*. Gunn had previously directed two feature

films: *Slither* and *Super*. Feige has repeatedly talked about how his decision to hire Gunn was obvious. He continuously looks for the best storytellers, regardless of the “superhero” stereotype. He looks for unique ways to best tell these stories and has been, on the whole, successful .

Is Vin Diesel directing *Furious 8*?

Vin Diesel is, without question, one of the busiest actors in the game right now. With *The Last Witch Hunter* getting its release soon, Diesel is also lined up for xXx: *The Return of Xander Cage*, director Ang Lee's *Billy Lynn's Long Halftime Walk*, *Guardians of the Galaxy 2*, and, of course, *Furious 8*. *Furious 7*'s director James Wan is busy with *The Conjuring 2: The Enfield Poltergeist*, and *Fast and Furious* 3-6 director Justin Lin is busy with *Star Trek Beyond*, so the *Fast and Furious* franchise is once again attempting to bring the family back together. Diesel and Lin have been meeting with Universal Studios to discuss directors and Rob Cohen (*The Fast and the Furious*) has been mentioned in a number of reports, though other reports count him out.

What other name has been mentioned? Diesel himself. He took to his Facebook page to make some interesting comments: “I will share something crazy that my mother said six months ago after the studio had me announce the date for 8 to the world ... ‘Either you direct 8 yourself ... or don't do it.’ Some of you Vinbook pioneers are all too familiar with my mother's wisdom, as I have posted her sayings in the past on our page ... but I wrote it off as just a mother's love and belief in me, though she has seen first hand what I've done to make these movies defy expectations and become increasingly successful, even when the studio thought I was crazy.” Diesel has a deep emotional — and professional — interest in the franchise, and has been fighting to keep it alive and kicking. A producer on each film since the fourth installment, Diesel is rightfully involved in all

director talks and understands the franchise more than virtually anyone. Whether or not he holds the other essential tools of a director isn't clear, but his passion for the success of *Furious 8* and beyond makes him an obvious consideration to sit in the chair.

Kingsman sequel could hit a speed bump

Kingsman: The Secret Service was a success on a variety of levels, but one in particular could put the inevitable sequel in trouble: the blastoff of Taron Egerton's career. Since starring as Eggsy, the actor was snatched up to star in Lionsgate's *Robin Hood: Origins*. With Lionsgate putting the film on the fast track, Egerton's two-film contract for *Kingsman* may put his role in jeopardy. Both films are set for an early 2016 production schedule and Egerton's role in *Kingsman* could knock him off *Robin Hood: Origins*. I'd obviously love to see him back as Eggsy, but *Robin Hood: Origins* seems like it could be interesting as well. Hopefully Hollywood throws the young actor a bone so that he can execute his role in both films.

Egerton can be seen as Teddy Smith in the upcoming gangster-drama *Legend* starring Tom Hardy and Emily Browning.

Ryan LaBarbera | Junior Staffwriter

moviesinmconomy

McConomy Auditorium, University Center

Jade Crockem | Staffwriter

Minions

Friday, Oct. 9th — 8, 10:30

Universal Pictures' most infectious creations are finally starring in their own movie. *Minions*, the movie about the small, yellow characters everyone fell in love with in *Despicable Me* is showing in McConomy this weekend. This movie begins with the journey of the minions as they begin as single-celled yellow organisms, evolve, and find a leader to serve. However, the minions struggle to keep a master which leads them into a deep depression. Follow the adventures of the three minions, Kevin, Stuart, and little Bob as they find a new potential master and go from the freezing temperatures of Antarctica to the bustling city of 60's era New York.

Spy

Saturday, Oct. 10th — 8, 11

Starring Melissa McCarthy as the desk-bound CIA analyst Susan Cooper, *Spy* is a classic comedy about an unlikely hero saving the day. After her partner falls off the grid, Cooper, the true face behind some of the CIA's most dangerous missions, volunteers to go undercover and stop a deadly arms dealer. Director of *Bridesmaids* and *The Heat*, Paul Feig, teams up with McCarthy again to make *Spy* a movie sure to keep you laughing out loud the entire time.

Annalise Keating makes long anticipated return

Crime drama *How to Get Away With Murder* starring Viola Davis returns for Season 2

How To Get Away with Murder (HTGAWM) — a product of the ShondaLand powerhouse — is one of the most buzzed-about shows on television right now, and for good reason. A week before *HTGAWM* launched its second season on ABC, lead Viola Davis became the first black woman ever to take home the primetime Emmy for Outstanding Actress in a Drama. She took the opportunity to give a truly inspirational speech about mainstream TV’s diversity problem: she quoted Harriet Tubman, acknowledged other black TV actresses who have helped pave the road forward, and drew tears from many in the audience.

There’s no doubt in my mind that *HTGAWM* is one of the most diverse shows out there, comparable with *Orange is the New Black* and *Sense8*. To be honest, that’s the main reason why I clicked on the first episode after the Emmys aired. I had no real idea what the show was about, but I’m one of those people who, upon hearing the word “diversity” applied to anything, comes running. I wasn’t disappointed. In the core cast of Davis’s Annalise Keating and her five law student interns, there’s only one white, straight man. Interracial and queer relationships abound; the healthiest couple on the show is undoubtedly Connor and Oliver: a white, gay man and his Asian, HIV-positive boyfriend. As a matter of fact, Oliver is currently TV’s only HIV-positive character.

Most other primetime shows would’ve hit their minority “quota” at half of *HTGAWM*’s cast of color and queer characters and patted themselves on the back. It’s incredibly refreshing to watch a show that responds to accusations of playing the “political correctness game” with even more diversity. Not only are Annalise’s main clients

for season two an Asian and black brother-sister duo, but the very first episode of *HTGAWM* establishes the main character as bisexual — Annalise is almost alone in this status, with the exception of Clarke from the CW’s *The 100*. There’s no warning, no fanfare, no nothing — except the sudden appearance of an ex-girlfriend, played by Famke Janssen, a.k.a. Jean Gray from *X-Men*. All hail Shonda Rhimes and the writing team of this show for being so blasé about media representation. Even if *HTGAWM* hasn’t checked off every box, this show has proven that it doesn’t take a spectacle to bring real-world diversity to the screen.

So, this show is diverse — but is it good? It’s certainly mastered the art of pulling you in with suspense and drama. Just ask my sleep schedule two weeks ago, during which I watched the entire 15-episode first season in two sittings. After I’d depleted Netflix’s supply of episodes, a brief Google search told me that the second season was starting the next day, so escape was more or less futile.

HTGAWM is a cross between *Legally Blonde* and *Law & Order* plus murder. Annalise Keating is a cut-throat criminal defense attorney and law professor with a team of student interns: the “puppy” underdog Wes (Alfie Enoch, Harry Potter’s Dean Thomas), master seducer Connor (Jack Falahee), yuppie legacy Asher (Matt McGorry), uptight princess Michaela (Aja Naomi King), and “the quiet one” Laurel (Karla Souza). While each episode features a “case of the week,” the underlying mystery for the watcher in the first season — fleshed out by a few flashbacks or flash-forwards per episode — is how and why the interns are going to murder Annalise’s cheating husband Sam. The pacing is so tight and the acting so compelling that

I found myself wondering how the show was going to continue past the first season. But when the finale killed off another important character, I realized that I’d been tricked. *HTGAWM* is *that* kind of show: the type of nail-biting, plot twist heavy, “drama for drama’s sake” show that I always try to avoid because I get too invested and it hurts me.

Well, it’s too late now; I’m invested. I’ve already streamed the first two episodes of the second season, which apply the same flashback structure to a new murder-related mystery. With *How to Get Away with Murder*, I came for the diversity and stayed for the drama. And I’m on a mission to drag everyone else down with me.

Ariel Hoffmaier | Forum Editor



Courtesy of ABC via Youtube.com

Frank Delfino (Charlie Weber, above right), one of Annalise Keating’s associate lawyers, is just one of many characters affected when Keating finds herself embroiled in a police investigation.



Andy's Wine Bar attracts slightly older crowd

Downtown hangout with free jazz an opportunity for evening of music, cocktails, and ambience

Named after Andrew Carnegie — or Andy Warhol, or both, it's never been made quite clear — Andy's Wine Bar in downtown Pittsburgh is a bar with a modern, cosmopolitan aesthetic, located in the lobby of the Fairmont Pittsburgh on Market Street.

Featuring dark countertops with gold shavings, retro lounge chairs, and window-side two-tops with tall, royal blue swivel seats, Andy's radiates "swank" from every inch of its decor. Wednesday to Saturday nights, a live jazz band performs in the bar, for an extra touch of class. "Jazz at Andy's" is open to the public, is free of charge, and features local jazz performers such as Dane Vannatter, Tania Grubbs, and Trudy Holler. The band is right there in the lobby at ground level, and you can literally sit right beside the performers as they are performing. The intimate setting is ideal for anyone who is a fan of jazz, and the lobby of the hotel offers wonderful acoustics for pleasurable listening. However, if you are completely uncultured like me and know next to nothing about jazz, the bar also offers other treats as well, including lots of alcohol.

Despite being marketed as a wine bar, wine is hardly the main selling point at Andy's; the wine menu is relatively limited and what is available seems somewhat overpriced. However, the bar does offer a mix of interesting cocktails which start at \$9 and up and includes some interesting items such as the Thai Vesper, which is a Beefeater 24 gin with coconut Lilette Blanc; the Bacon Shrub, a bacon infused Maker's Mark; and a seasonal warm spiced wine, a cinnamon and orange cabernet with butternut puree.

I got the Peach Ancho Mojito made with Mount Gay rum, while my friend ordered the Meal Undone, a Belvedere vodka infused with ginger. The cocktails are flavorful and punchy, and the menu seems to change up often, so there should be some new concoctions to try within a few weeks or so. What's more, each order of drink comes with a colorful little Warhol-style coaster that has the face of Andrew Carnegie on one sided for those whose quest to collect free stuff with Andrew Carnegie's face on it is never complete.

The food menu also contains some interesting items. It includes small appetizers and desserts such as pierogies, cheeses, and espresso ice cream, as well as burgers, sliders, and salads. I ordered some very nice lamb sliders, which came with feta cheese, beets, and tahini sauce. However, in general the appetizers and desserts seem to be somewhat more inventive and exciting than the entrees, so I would stick with those. The food service was also pretty slow; I

waited over 25 minutes for my sliders when the bar was only about half full.

Unfortunately, the offerings at Andy's do run a bit pricey, especially for a broke college student. It's perhaps for this reason, and the fact that it is located downtown, that the crowd at Andy's seems to be mostly over 30. During the early evening, there are a number of working professionals in suits and ties leaving work to get a drink, and those are about the youngest people you'll find there throughout the night. It can be charming to see a couple or two waltzing around in an open space while the jazz band plays in the background every now and then, but the sheer number of older patrons after 10 p.m. can make a 20-something feel rather out of place.

Still, if you don't mind hanging around with people who may be your parents' age, or if you're a fan of jazz or fine cocktails, Andy's is a nice place to relax after a long

week, especially before the bar becomes too full. It has a wonderful, classy ambience and is located in a beautiful area of downtown with many good restaurants nearby, such as Meat & Potatoes and Primanti Brothers. Also, if the cocktails run a bit expensive, there are also a selection of beers that go for around \$2 during Happy Hours. Their October performance schedule is posted on their website, for anyone interested in seeing local performers.

Xiyu Wang | Junior Staffwriter



Xiyu Wang | Junior Photographer



Xiyu Wang | Junior Photographer

Left: A peach mojito, one of the tasty, but expensive, cocktails offered at Andy's Wine Bar. **Right:** The comfortable and gleaming interior of the venue.

Tales from Abroad: adventures in Chile

Traveling gives junior Emily Vokach-Brodsky the chance to get answers to important questions

When I turned nine years old, I made my first bucket list. I proudly told this to my mom, rattling off the random assortment of places I would inevitably visit: Africa, Italy, Spain, and that big waterfall in Canada. At that point, I don't think she realized she was raising a daughter who would go on to save every paycheck for future trips. Now, she uses the anecdote to justify my absences during winter and summer break when I should be at home and am instead "gallivanting around the globe" — her words, not mine.

The summer after my sophomore year of high school, my best friend and I made a summer bucket list filled with exciting adventures for 15 year olds. We checked off activities like 3 a.m. trips to donut shops, beach bonfires, and sleeping under the stars. If you know me, you know I like lists. I make to-do lists, grocery lists, lists that categorize how and what I need to study when preparing for exams. I've always considered bucket lists a great way to establish my goals and capitalize on the opportunities presented to me. They can help turn a potentially mundane summer day into a memorable day at the beach, for all my fellow Californians out there.

Before leaving for my semester abroad in Chile almost three months ago, I obviously made a pre-departure bucket list. It included a random assortment of things:

1. Become fluent in Spanish
2. Visit Patagonia
3. Develop at least one new hobby (Climbing? Surfing? Chocolate making? All three?)
4. Play soccer with locals
5. Kiss a Chilean

After dinner one night at my host family's house, I had a long conversation with my host dad. He listened to me stumble my way through a conversation in Spanish about family dynamic, travel, and the recent political history of Chile; I told him about my life and about my recent adventures. At the end of the conversation, he told me "estás buscando algo" meaning "you are looking for something." I think he is right. More than looking for experiences to check off a bucket list, I'm looking for answers to big questions. I'm looking to be challenged. I'm looking for international experiences that will inevitably change the way I think about and approach situations.

I realize how so incredibly lucky I am to have the opportunity to travel as much as I do. I come from a financially stable background and have the distinct privilege of being able to dedicate a majority of the money I make to my travel fund. Additionally, my amazing mother supports and encourages me each time I tell her about volunteering in Central America or visiting Europe instead of spending Christmas at home. To anyone who has the opportunity and is

considering study abroad: do it. Travel. Explore. Leave your bubble. Push the limits of your comfort zone. You don't necessarily have to leave Pittsburgh to experience something new that challenges the way you think, but I truly believe that there is something so unique to being in a foreign, new place for an extended period of time as a young person. For me, Chile was the perfect place to spend my study abroad. I wanted conversations that address the shortcomings of political figures and discuss how the world reacts to human rights abuses. I wanted to be surrounded by politically active young people who speak out, go on strikes, and question authority.

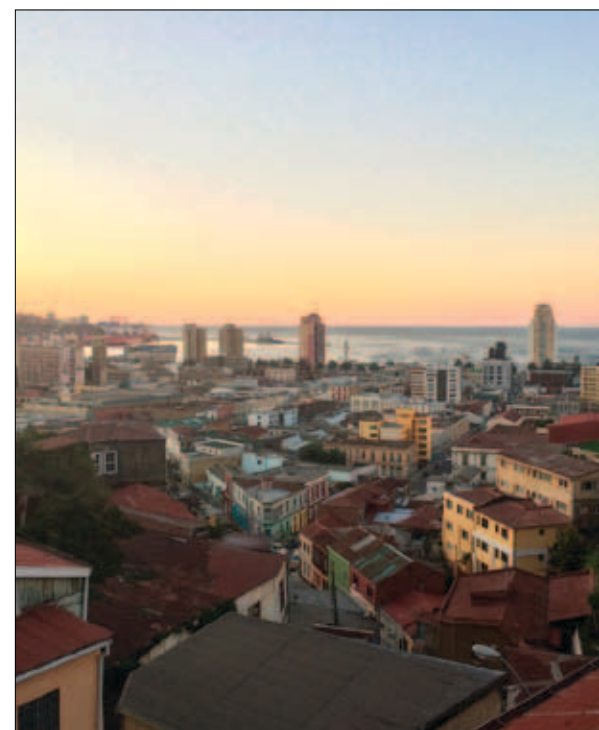
Despite being one of those obnoxious list-lovers, it goes without saying that the moments that are completely unplanned and unexpected can be some of the best. Yesterday, I met up with a few friends for ice cream — at one of the world's top 25 ice cream parlors. If that isn't enough of a reason to visit Chile, what is? We sat in a plaza in silence, eating our ice cream and watching people pass by. A group of young travelers suddenly started playing in a giant drum circle and drew in a crowd. People were dancing and tapping their feet along to the beat. It was the epitome of Valparaíso in front of me: a city of music, passion, travel, accompanied by public buses and skateboarders in the background. On the way home that evening, I took a public bus, which quickly filled up with people. With loud music overhead, the bus driver took turns alarmingly fast, sending me careening into those around me. As I stood, squished in the aisle between an older man and some teenage boys, I looked down at the peaceful young family in front of me. The little baby boy was asleep in his dad's arms, and his mom was drifting in and out of sleep, leaning on her partner's shoulder. In this crazy world, they found peace. As the bus climbed Valparaíso's hills, I stood there with a goofy smile on my face, happy that I chose to study in this country, during this semester, and happened to get on this bus.

Emily Vokach-Brodsky | Junior Staffwriter



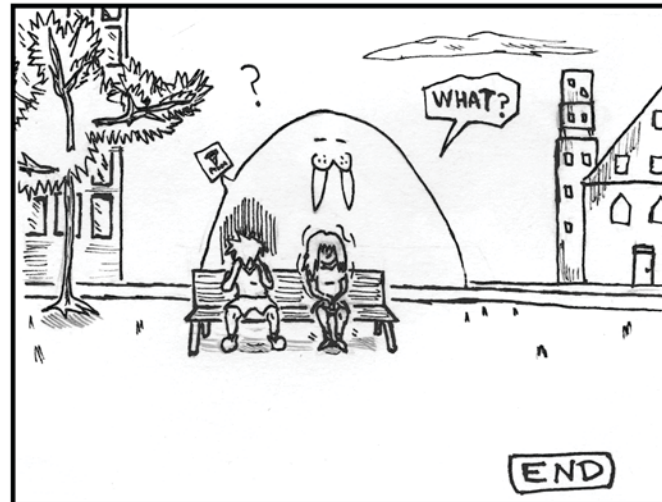
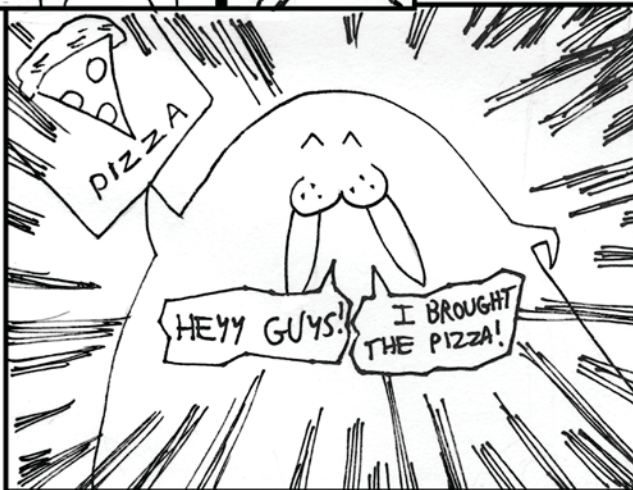
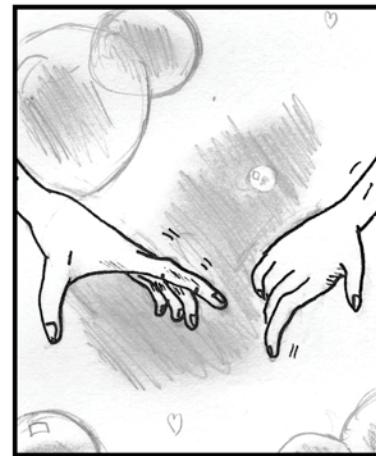
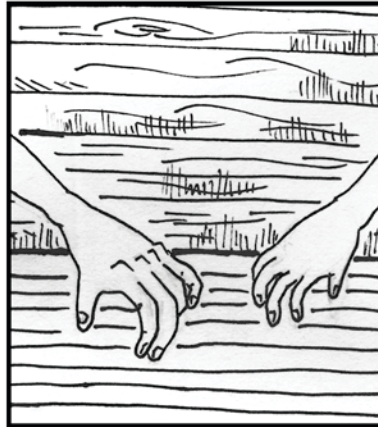
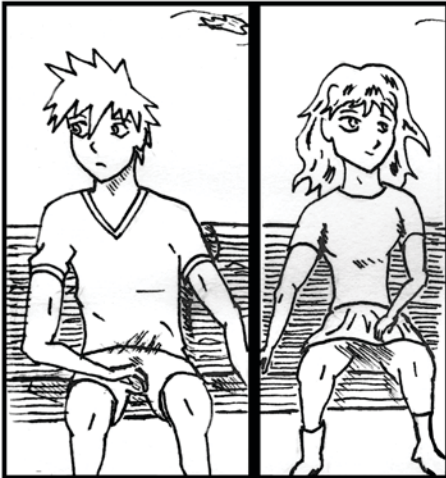
Courtesy of Emily Vokach-Brodsky

Traveling is about expanding yourself as a person and discovering what kind of person you want to be. Eye opening sights and people around the world can help to refocus personal energy and solidify and strengthen values.



Courtesy of Emily Vokach-Brodsky





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(to be continued)

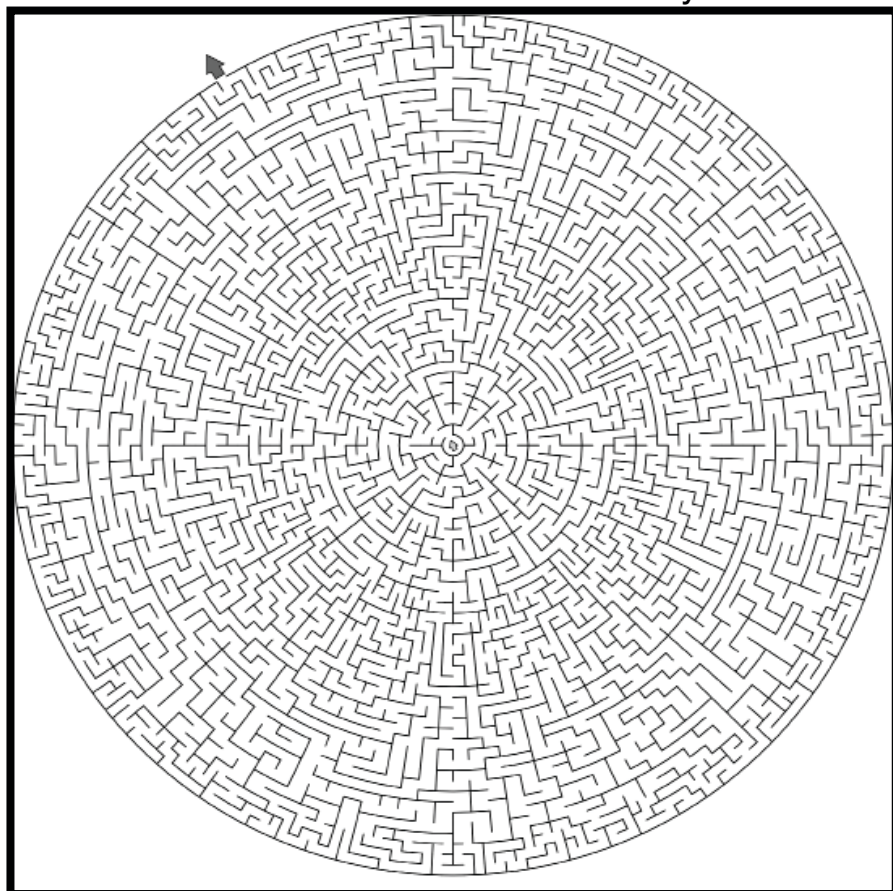
Sudoku Puzzle: Very Hard Difficulty

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

Sudoku courtesy of www.krazydad.com

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

Maze Puzzle: Hard Difficulty



Maze courtesy of www.krazydad.com

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

Solutions from Sept. 28

1	2	3	4	5	6	7	8	9	10	11	12	13					
D	E	E	M		A	R	S	O	N		P	A	C	T			
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28			
I	E	S	T	O		N	E	H	R	U		A	S	H	Y		
29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44		
E	S	T	O		S	L	I	D	E		I	T	I	N	I		
45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60		
M	O	U	N	T	A	I	N		V	E	N	I	C	E			
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76		
		B	A	T	T		M	O	L	T							
77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92		
S	E	R	E	N	E		E	S	S	A	Y	I	S	T			
93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108		
P	L	E	A	S		R	A	D	O	N		N	C	O			
109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124		
L	I	A	M		C	A	R	O	L		P	L	O	W			
125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140		
I	T	D		S	O	I	L	S		I	R	E	N	E			
141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156		
T	E	S	T	C	A	S	E		H	O	O	T	E	R			
157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172		
		L	A	C	E		C	O	U	P							
173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188		
T	Y	R	A	N	T			P	A	S	S	O	V	E	R		
189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204		
R	E	A	L					I	N	E	R		S	A	G	A	
205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220		
O	T	T	O					O	R	A	T	E		A	N	A	T
221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236		
D	I	S	C					N	A	T	A	L		L	E	N	A

Crossword

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

Sudoku

Horoscopes

What do the stars say about your next dessert choice?

aries

march 21–april 19

Banana Split: You're independent, enthusiastic, and impulsive. You haven't thought it through, but it will probably be wonderful.

taurus

april 20–may 20

Raw Cookie Dough: You want something dependable and indulgent, but because you're just a little impatient, you don't want to have to wait too long to get it.

gemini

may 21–june 21

Mixed Gummy Candy: Gemini are notoriously indecisive, so you're going to want options. A bag of mixed gummy candies is the best choice.

cancer

june 22–july 22

Cheesecake: Just like a cheesecake, you are dependable and nurturing.

leo

july 23–aug. 22

Creme Brulee: Like the creme brulee, Leos have a tough exterior, though they are ultimately soothing and warm.

virgo

aug. 23–sept. 22

Frozen Yogurt: You want something that gives you full control. Any flavors, any toppings, exactly how you want them all in front of you.

libra

sept. 23–oct. 22

Assorted Chocolates: You appreciate the finer things, like a beautifully presented box of chocolates.

scorpio

oct. 23–nov. 21

Apple Pie: Independent and spirited, but still with respect for tradition, your best choice is the apple pie.

sagittarius

nov. 22–dec. 21

Rice Krispy Treat: Sagittarius are simple and complain very little. The Sagittarius personalities, like rice krispies, are the life of the party.

capricorn

dec. 22–jan. 19

Dark Chocolate - Capricorns are responsible and goal oriented. A single piece of antioxidant-rich dark chocolate suits your self-disciplined personality.

aquarius

jan. 20–feb. 18

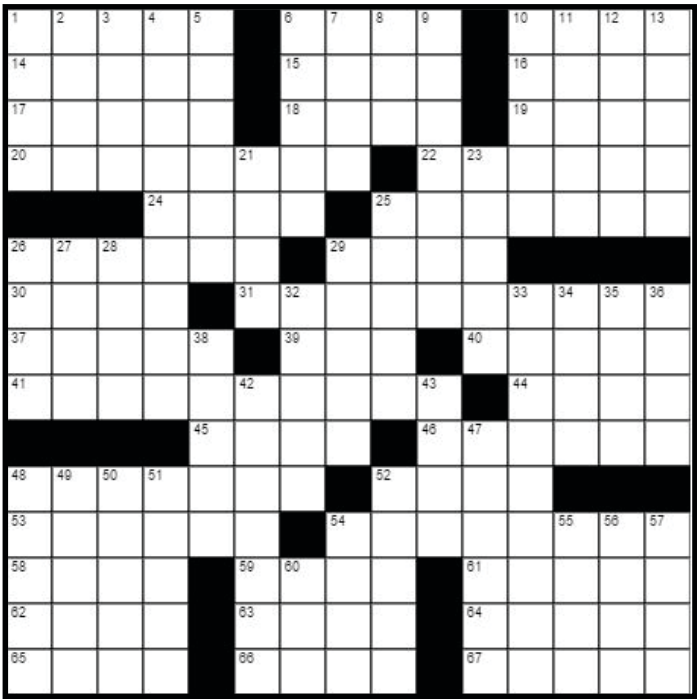
Lemon Bar: You've got a bit of a biting kick, just like a tart, delicious lemon bar.

pisces

feb. 19–march 20

Cupcake: You enjoy a bit of whimsy and escapism, so you'll appreciate a brightly colored decorated cake.

Maryyann Landlord | Comics Editor



Crossword courtesy of *BestCrosswords.com*

ACROSS

1. "Socrate" composer Erik
6. Essay
10. Colombian city
14. Stadium used for sports or musical events
15. Dies ____
16. Mil. addresses
17. Abbreviated time off
18. Money maker
19. Spool
20. Type of ballot
22. Riding
24. Be in front
25. Shrink
26. Uphold
29. Sometimes you feel like ____
30. Swedish auto
31. Printmaking technique
37. Author Zola
39. Close friend
40. Greetin
41. Renowned
44. Robert of "The Sopranos"
45. Alleviate
46. Regard
48. Snappy comebacks
52. Hawaiian goose
53. List of corrections
54. Made known
58. Oration station
59. Small child
61. Transport
62. Italian wine city
63. Put down
64. Make up for wrongdoing
65. Profits
66. Effortless
67. French beans?

DOWN

1. Franklin D.'s mother
2. Member of a largely Middle Eastern people
3. Sawbucks
4. Ineffaceable
5. Breadwinner
6. Measured with a watch
7. Canal of song
8. ____ Clemente
9. Lockjaw
10. Christmas song
11. Mimicry
12. Silt deposit
13. Atoll unit
21. Highland hats
23. Bring forth from the egg
25. Slender part of the leg
26. Just ____!
27. Renown
28. Go belly up
29. Having wings
32. Bridge declaration
33. Repeat
34. Women's magazine
35. Robert ____
36. "Cheers" regular
38. Movie critic Roger
42. Capable of being evaluated
43. Like an abyss
47. Winter vehicle
48. V-shaped fortification
49. Delete
50. Country singer Travis
51. Fertile area in a desert
52. Destitute
54. Baseball stats
55. Horse's gait
56. Sea-going eagle
57. Changes color
60. Battery size



Monday 10/05

Mellow Mondays

Market Square. Noon – 1 p.m.

Part of the continuation of Summer in the Square, Mellow Mondays feature live acoustic entertainment to kick off the week. This Monday features performances by Darryl and Kim. The performances are free and open to the public.

Tuesday 10/06

Richard Stern, Harpsicord

Kresge Theater. 8 p.m.

Richard Stern will be performing the works of Bach, Scarlatti, D'Anglebert, Forqueray, and Sweelinck on the harpsicord. This performance is in the Kresge Theater and is free and open to the public.

Wednesday 10/07

I Never Learned To Spell “Successful”

Kresge Theater. 12:30 p.m. – 1:30 p.m.

Join Carnegie Mellon Alumni Javier Soltero in the first lecture of the Dietrich College Entrepreneurs Speaker Series sponsored by Center for Entrepreneurship and Innovation. This lecture will focus on Soltero's rise to vice president of Outlook Program Management at Microsoft.

Thursday 10/08

An Expanding and Expansive View of Computing

Connan Room. 2 p.m. – 3 p.m.

Jim Kurose, assistant director of the National Science Foundation's Computer & Information Science & Engineering (CISE) Directorate will present a talk on how advances in computer and information science and engineering provide research and education opportunities

LaunchCMU

Cohon University Center. 2:30 p.m. – 6:30 p.m.

The Center for Innovation and Entrepreneurship presents this technology startup and research showcase. There will be a demo and poster session from 2:30-3:30 followed by 10 showcase talks from 3:30-5:30. Some of the companies in attendance include Duolingo, Interstacks, and Acrobatiq.

SCS Distinguished Lecture

Rashid Auditorium. 4 p.m. – 5 p.m.

Manuela Veloso, the Herbert Simon University Professor of Computer Science and Robotics, will be discussing Carnegie Mellon's Robot Soccer team.

War and the Humanities

Porter Hall 100. 4:45 p.m. – 5:45 p.m.

Best-selling author, Pulitzer Prize winner, and Washington Post Journalist Rick Atkinson will be discussing the correlations between war and the humanities. This event is free and open to the public.

Strategies for Concise Writing

IDeATe Studio A. 5 p.m. – 6 p.m.

Learn how to write more concisely at this workshop focused on how to write and communicate effectively. Pizza will be provided at the event.

Friday 10/09

What's Gone Wrong In Washington, and Why It Doesn't Have To Be This Way

Rangos 1 & 2. 1 p.m. – 2 p.m.

Former US Senator and House Representative Olympia Snowe will discuss current problems occurring in Washington and how to combat them at this event hosted by the Center for International Relations and Politics.

Saturday 10/10

Carnegie Mellon University Wind Ensemble

Kresge Theatre. 5 p.m.

The Carnegie Mellon University Wind Ensemble, under the direction of George Vosburgh, Thomas Thompson, and Stephen Story, will perform works by Dvořák, Holst, and several others. The show is free and open to the public.

Ongoing

The Mysterious Nature of Fungi

Hunt Library, 5th Floor. Monday – Friday, 9 a.m. – Noon and 1 – 5 p.m.; Sunday, 1 p.m. – 4 p.m.

From now until Dec. 17, The Hunt Institute for Botanical Documentation will have its fall exhibit on display. The exhibit displays a variety of organisms found all over the world, and aims to show just how mysterious each one can be. Viewing the exhibit is free of charge and open to the public.

Beyond the Obvious

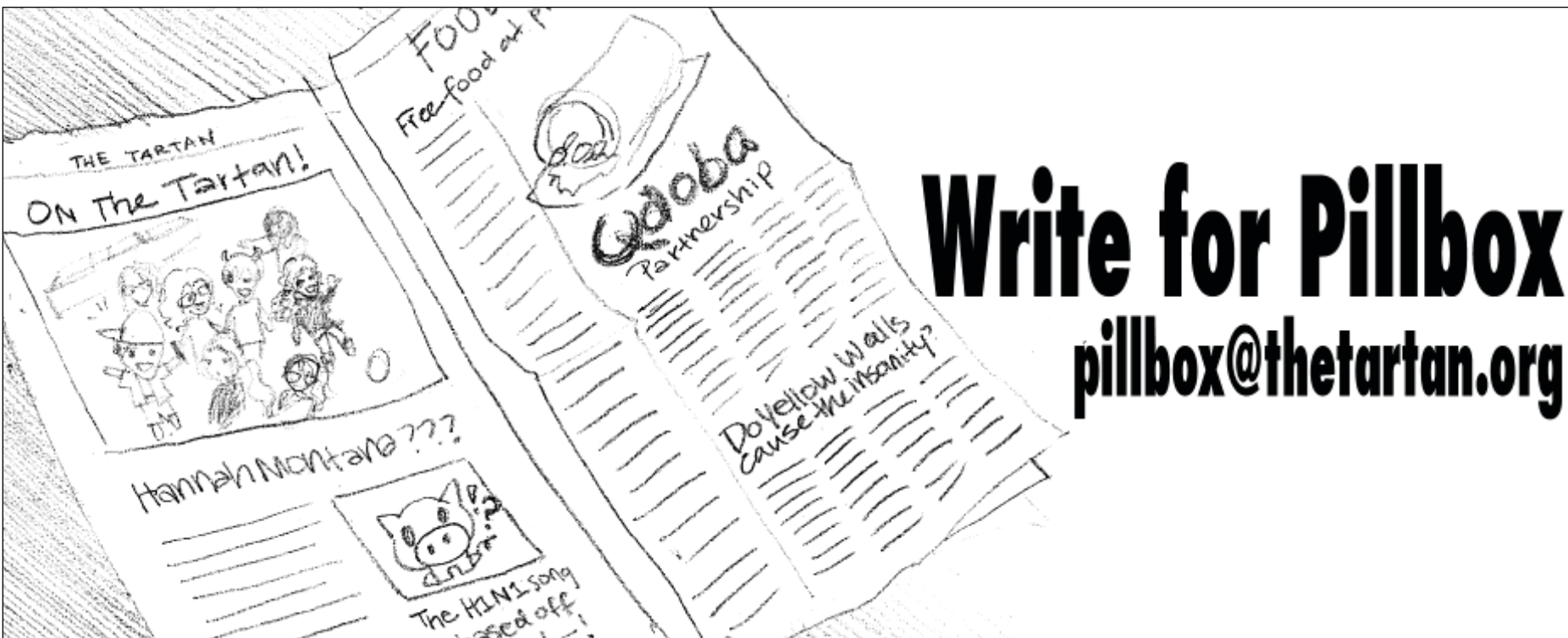
Robert Morris Media Arts Gallery

Two Carnegie Mellon artists will be featured in an exhibit at the Robert Morris University Media Arts Gallery, beginning Oct. 1. Collaborative photography and poetry works by Carnegie Mellon Professor Jim Daniels and Charlee Brodsky will be showcased in this month-long exhibit. It will include the duo's work from the past decade, as well as an interactive art component.

Want your event here?

Email calendar@thetartan.org.

Compiled by Jade Crockem | Junior Staffwriter



flux pavilion concert.



Raheela Ahsan | Junior Photographer

Stopping in Pittsburgh after the release of his first album *Tesla*, British dance DJ Flux Pavilion performed at Stage AE, backed by Vancouver-based electro house and dubstep artist RainMan and DJ duo Diskord. The bass-filled tour takes the artists across America and England. **Above:** Opener Diskord dramatically takes the stage behind their blacked-out logo. **Below:** Stage AE was packed for the night of dancing and beats.

