FORUM

CHIMP robot has potential to save lives. A8

SCITECH

A helpful guide to the Strip **District** • B8

PILLBOX

IARIAR

thetartan.org @thetartan January 20, 2014 Volume 108, Issue 14

Carnegie Mellon's student newspaper since 1906

New on-campus laundry system installed



Briana Williams/Junior Photographer

Mac-Gray Campus Solutions replaced eSuds as the on-campus laundry service with faster, more efficient machines.

BRIAN TRIMBOLI News Co-Editor

Students who live on campus returned from break to a brand-new laundry system, which features more efficient machines.

Over winter break, Carnegie Mellon's Housing Services replaced 200 washers and dryers, including those in all on-campus residences.

The only properties that did not receive new launmachines are those that Carnegie Mellon leashousing from, includ-Webster Apartments, Fairfax Apartments, Shady Oak Apartments, and Neville Apartments.

The new machines come after a decision to change the campus laundry vendor from eSuds to Mac-Gray Campus Solutions, a company that has been providing laundry services to college campuses since 1951, according to the their website.

The first thing that students will notice about the new machines is just how new they are. According to director for Housing Services Tom Cooley, most of the machines that were removed over break were over a decade old.

"I'm really glad we got new machines," said Morgan Liu, a sophomore biology and psychology double major who lives on campus. "The

old ones we had were in bad shape. Last semester I had to put my clothing through the dryer three times, and it still wasn't dry."

The new machines "are more energy efficient and do more laundry, so you'll get more bang for your buck when it comes to what you put in there for each load," Cooley said in an interview.

When the new machines were installed, many of the laundry rooms themselves were refurbished as well.

While most of these improvements involved the electricity that supplies the washers and dryers, the laundry room in Donner House received a new ceiling.

When a student swiped his or her card to use an eSuds laundry machine, they would enter the machine they wanted to use and then receive an email to their Andrew ID when their laundry was done. Mac-Gray Campus Solutions offers a similar, but improved,

"I think the biggest reason we switched to this vendor was a system they call LaundryView," Cooley said. "This is a system students can use either on their mobile [phone] or on their computer. They log on, see what machines are available real-time, and can set up a text message alert to

See LAUNDRY, A3

Peer tutor program wins national award

BRENT HEARD

Senior Staffwriter

Carnegie Mellon's Academic Development department received the 2014 National Tutoring Association Tutoring Excellence Award for the best university tutoring program, last week. The National Tutoring Association is an organization for professional tutors that presents five awards each year.

The criteria for the National Tutoring Association Tutoring Excellence Award are, as listed on the National Tutoring Association's website: "quality of service to students is recognized by peers, school administrators or community leaders," and "effectiveness has been demonstrated through achievement of objective criteria."

After being notified of the award, director of Academic Development Linda Hooper and Peer Tutor Program Coordinator John Lanyon announced the news to their tutors at the first peer tutor meeting of the semester.

A cake was brought into a classroom in Academic Development's office in Cyert Hall, and the email describing the award was projected onto the room's whiteboard.

In the past semester, Academic Development had 3,217 contacts for its walk-in tutoring service, which broke last year's record of 3,089 contacts. Contacts describe anyone who attends and receives walk-in tutoring help.

Hooper described the progress Academic Development has made in the past

decade during the announcement. "I came to CMU in 1997 in the summer," Hooper said. "We only had twelve tutors and one graduate student supervising.'

"We started the standing appointment program in 1999 or 2000, and only had walk-ins before then," she continued.

Hooper projected a graph onto the whiteboard showing that, since 1999, the number of walk-in tutoring sessions grew from 320 to over 3,000.

"This growth speaks to the quality of our program," she

Speaking of the Tutoring Excellence Award, Lanyon said, "I can honestly tell you it's quite a prestigious award. I'm almost speechless."

Academic Developement counseling on organization, time management, and study skills; peer tutoring, including walkin sessions and standing appointments; supplemental instruction sessions; and EX-CEL study groups are the four services offered by Academic Development.

Junior computer science major Annika Peterson, who tutors subjects including physics, computer science, and math for Academic Development said, "I fell in love with the place."

She first got involved with Academic Development the spring of her freshman year and said that the most fulfilling part of the tutoring process was that "point in student's learning where I'm no

See TUTORING, A3

Professor wins PECASE award for ship hull analysis program

MACKENZIE NICHOLSON Junior Staffwriter

Jessica Zhang, a professor of mechanical engineering, has been named a winner of the Presidential Early Career Award for Scientists and Engineers (PECASE) in recognition of her development of computer imaging and analysis for boats. She has been specifically awarded for the development of computer algorithms that create novel geometric modeling and analysis programs for Navy ships and other vessels. Her research is adaptable to nu-

merous diverse applications.

The PECASE, founded by Bill Clinton in 1996, is awarded annually by the former U.S. President in order to recognize the achievements of relatively young researchers. 102 recipients of the award were named on Dec. 23, 2013. In a statement regarding the PECASE recipients, President Obama said, "The impressive achievements of these earlystage scientists and engineers are promising indicators of even greater successes ahead. We are grateful for their commitment to generating the scientific and technical advancements that will ensure America's global leadership for many years to come."

Zhang said, "For this award, there's a lot of information about it already out there — a lot of news about it. It's the highest honor for us, the junior faculty. It takes more than one year to go through the nomination process. So, I'm really happy to get it."

Each recipient of the PE-

CASE is backed by a particular government department or agency; Zhang's research is supported by the U.S. Department of Defense. Her programs are used in simulations to validate the quality of the Navy's craft designs and to analyze them for any potential issues, especially in the early stages of design. Zhang's work helps meet the Navy's ongoing need for better ways to inspect their designs.

Zhang's work, however, can be applied to more than ships. When asked about the scope of her research, she said, "The fundamental research is all based on building computer models. The model can be the boat, can be the ship, can be the submarine, but it can also be the heart, be

A significant portion of Zhang's work is in the field of biomedical imaging. She has developed new technology that is similar to that used by the Navy, but is used to produce geometric images of everything from the external human body to internal organs and biological components at the molecular level. This work has various applications in computational biomedicine and engineering.

Yet the potential applications of her research do not stop there. Zhang is interested in expanding her technology into many other uses. "I like all of the technology development — the things that give us new problems," she said. "I like computation — to build computer models. Those can be useful for many different applications. We have a lot of potential with many other

See AWARD, A3



Jessica Zhang, a professor of Mechanical Engineering, recently won the PECASE award for her work with computer analysis of boats.

WSP kicks off first semester



NOËL UM

News Co-Editor

Six students who left Carnegie Mellon's Pittsburgh campus behind for Capitol Hill have already taken advantage of both the academic and career opportunities of the revamped Washington Semester Program (WSP), which launched this semester.

Previously, Carnegie Mellon sent students to Georgetown University to participate in a program in which they could study in Washington, D.C., while taking advantage of internship opportunities. Last spring, however, the partnership with Georgetown ended and WSP was launched in an effort to grow Carnegie Mellon's presence in Washington, D.C.

The WSP program helps connect its students with high profile internships, houses its students right behind the Supreme Court, and offers Carnegie Mellon-taught courses consistent with the international relations and politics curriculum.

"This new Carnegie Mellon program allows us to shape the entire intellectual policy experience in Washington, D.C., for our students, instead of having them attend capital-area universities for a semester," said WSP director and associate professor of social and decision sciences Kiron Skinner. "Many top-tier research universities have a presence in Washington that includes an undergraduate education component. This will give CMU students direct insight into how the government works and interacts with NGOs and other organizations in D.C."

The program helped its six WSP students land internships consistent with their interests in Washington.

"There's a commitment from those of us running the program in supporting the students pursue internships that really advance their intellectual and professional interests," Skinner said.

Junior ethics, history,

and public policy major Latif Elam is interning at the office of U.S. Senator Kirsten Gillibrand; junior international relations and politics major Chloe Hawker is working at the New East Asia Center for Strategic Studies, and junior ethics, history and public policy major Emily LaRosa is interning at the Northeast Midwest Institute.

Junior decision science and international relations and politics double major Molly Shanley is working at the U.S. Department of Justice's Child Exploitation and Obscenity Section; junior policy and management and decision science double major Megan Steinmetz will work at the U.S. Department of State's Bureau of Human Resources; and junior French and francophone studies major Edward Wojciechowski will intern at the Embassy of France in the Press and Communications

Having Carnegie Mellon

See WASHINGTON, A3

FEATURE PHOTO

CMU welcomes prospective students





On Sunday, a crowd of prospective students went on tours and listened to student panels at the start of one of the semester's two sleeping bag weekends. The prospective students were matched with their Carnegie Mellon student hosts in Rangos Hall Sunday night.

Campus Crime & Incident Reports

Assisting an Outside Agency

Jan. 11, 2014

University Police responded to the University of Pittsburgh Police, in reference to an intoxicated Carnegie Mellon student who was taken into custody after engaging in multiple fights. The University of Pittsburgh Police cited the male for public drunkenness and disorderly conduct. The University Police officers ensured that the student was

Property Damage/Vehicle Incident

taken to his residence and re-

leased to his roommates.

Jan. 11, 2014

The driver of the vehicle stated that he failed to negotiate the turn at the intersec-

tion of Forbes and Morewood avenues, at which time he lost control. The vehicle skimmed off the tree located at the corner of the intersection and finally stopped after striking the corner of 1091 Morewood Ave. (Alpha Epsilon Pi Fraternity). No one was hurt as a result of the accident. The vehicle was towed from the scene and repair work was necessary to the Carnegie Mellon-owned building. The Pittsburgh Police cited the driver for careless driving and for a violation related to financial responsibility.

Driving Under the Influence

Jan. 12, 2014

A University Police officer on patrol stopped a vehicle traveling on Forbes Avenue for careless driving. The driver was arrested for driving under the influence of alcohol and was later taken to the Allegheny County Jail because the driver was not a legal U.S. citizen.

Suspicious Person

Jan. 12, 2014

A Carnegie Mellon student entered the police station to file a report about a suspicious male who he believed was following him from various locations on the University of Pittsburgh campus to the area of South Craig Street. The suspicious person was described as a clean-shaven Caucasian male in his mid-to-late 30s at 5'9" with a medium build, a bald spot on the top of his head, and short dark hair. At the time of the incident, the

ing blue jeans and a beige winter coat with no glasses, scars, or visible tattoos. Officers were unable to locate the suspect.

suspicious person was wear-

Harassment Incident

Jan. 14, 2014

A harassment incident took place in the University Center. The victim stated that his shirt was grabbed and he was verbally threatened during a basketball game. All parties, including witnesses, were identified on scene. University Police are investigating this incident.

NEWS IN BRIEF

Carnegie Mellon professor given APA early career award

J. David Creswell, associ- into how self-affirmation imate professor of psychology in the Dietrich College, has been chosen by the American Psychological Association (APA) to receive the 2014 Distinguished Scientific Award for Early Career Contribution to Psychology, in the field of health psychology.

The APA's award recognizes scientists for their work and contribution throughout the first nine years after receiving a doctoral degree. Also a member of the Center for the Neural Basis of Cognition, Creswell specializes in studying the impact of the human mind and brain on physical health.

Creswell has studied management and intervention strategies for stress, contributing work on how mindful meditation can reduce stress, loneliness, and disease progression while improving health. He has also delved

proves problem-solving and recovery abilities.

Additionally, Creswell has used human brain imaging to study learning and decision making. According to a Carnegie Mellon press release, he recently found that the brain regions responsible for making decisions continue to be active, even when the conscious brain is distracted with a different task.

In the press release, the head of the department of psychology, Michael J. Tarr, stated, "David is very deserving of this award, and we are all extremely pleased that the American Psychological Association decided to recognize him for his achievements."

Creswell is set to receive the award at the APA's convention, which will take place in Washington, D.C., from Aug. 7–10.

CMU researchers look to lower mobile device energy cost

Carnegie Mellon's Jeyanandh Paramesh and Pulkit Grover are creating tools and systems aimed to reduce the energy consumption from wireless mobile device data traffic. Because mobile devices are expensive, consume large quantities of energy resources, and compete for airwave access, the two researchers are hoping to create a more efficient system.

According to a university press release, thanks to a four-year, \$800,000 grant from the National Science Foundation, Paramesh and Grover, assistant professors of electrical and computer engineering, "are working to establish new information theory, concepts, and technological solutions to keep pace with the explosion in wireless traffic, which is projected to outpace 'Moore's Law,' the trend that predicts that transistor capacity will double every 18 months." The systems

operate in millimeter-wave frequency bands, where large bandwidth can be found.

The duo's hope is that their system will be effective enough to lower energy use by at least 50 percent. In the press release, Grover stated, "Part of our novelty lies in designing systems that reduce the energy it takes to send a message together with the energy it takes to decipher that same message. These two problems have traditionally been addressed in an isolated manner, leading to huge inefficiencies in energy usage by existing systems."

On a broader scale, the two feel that their research will help train new scientists with experience in interdisciplinary fields, to develop new courses, and to include more women and minority groups in their work.

> Compiled by **ALVIN MATHEW**

WEATHER







TUESDAY High / Low

19/8

WEDNESDAY

High / Low 17 / 15

THURSDAY High / Low 21 / 10







FRIDAY High / Low

25 / 22

High / Low

29 / 14

High / Low 21/6

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.

STUDENT SENATE MEETING MINUTES

Anita Barkin's Health Policy Presentation

Director of Student Health Services Anita Barkin gave a presentation to Student Senate on the recently updated vaccination and health services policies. Barkin last presented the policies to Senate in December, and during that time Student Health Services agreed that they, along with student representatives from both the Undergraduate Student Senate and the Graduate Student Assembly, should re-

view the student health policy

University Health Services has a link on their website with a list of all required vaccinations. The updated vaccination policy includes a slight change in wording that allows Student Health Services to update the list of required vaccines in line with national standards.

Chair report

Lukas Ronner, senior chemistry major and Senate chair, and Ashley Reeder, senior chemistry major and Senate vice chair talked about their plans to draw more students to the Senate general body meetings on Thursdays, which are open to the student body, especially for relevant ex officio reports. They also discussed plans to hold a large town hall meeting to talk about Faculty Course Evalua-

Ex Officio Report: Mike Steidel, Director of **Undergraduate Admission**

Director of Undergraduate Admission Mike Steidel gave a detailed report on the undergraduate admissions process. After the regular admissions deadline of Jan. 1, the Office of Admissions is working hard to make decisions on every application by the deadline. Undergraduate Admissions has 17 full-time counseling staff, seven full-time support staff, and 20 part-time application readers.

The Office of Admissions also employs students as office assistants and Andrew Ambassadors, who give tours and perform a variety of other tasks.

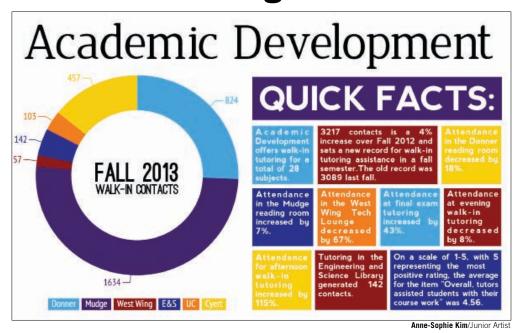
Steidel also talked about Carnegie Mellon's financial aid process: The first-year financial aid budget is approximately \$18 million, part of \$75-\$80 million spent on aid across the university. Currently, 55 percent of students are on needbased aid.

Announcements

There will be a variety of activities today for Martin Luther King Jr. Day, including a listening tour by President Subra Suresh and a speech by Dr. Jendayi Frazer, director of the Center for International Policy and Innovation, entitled "Leading with Courage and Conviction."



National Tutoring Assocation honors CMU



From TUTORING, A1

longer needed."

"In a weird way, my job is to make myself obsolete," she said. "I love seeing my students reach their full potential."

When asked what separates Carnegie Mellon's Academic Development program from that of other universities, Hooper said, "We go to conferences often and see other programs, and ours seems more comprehensive. There aren't loose ends." She emphasized Academic Development's attention to detail.

"Our tutors are very accountable and do a good job," she added.

compared the Lanyon structure of Academic Devel-

opment tutoring to a baseball team, saying "I create the lineup, but the players really determine the outcome."

Lanyon also stressed the importance of the feedback that Academic Development receives about its programs. The Academic Development meeting where the award was announced began with Lanyon passing back sheets of comments and rankings to each tutor from their previous sessions. "We're very responsive to the campus community," he said.

Both Hooper and Lanyon stressed the role that keeping data on tutoring is a useful source of feedback on the effectiveness of Academic Development programs.

In addition to setting a new record for fall semester attendance, 390 standing tutoring appointments were made last semester and the average evaluation of tutoring on a 1 to 5 scale for multiple survey items was 4.85.

Mac-Gray makes doing laundry easier

From LAUNDRY, A1

tell them when their laundry is done," Cooley said.

LaundryView provides a live model of each laundry facility that students can consult to see, in real-time, which washers and dryers are available.

Mac-Gray also ises carbon neutral laundry rooms through a partnership with Carbonfund.org, a service that, according to their website, offsets carbon emissions through renewable energy purchases, planting trees, and increased energy efficiency.

Cooley also highlighted the improved maintenance services that Mac-Gray Campus Solutions offers. The laundry vendor, Cooley said,

tracks the usage of each machine. "If a machine hasn't been used for a while, there's usually a good reason for that, and we can send out a technician for a machine,' Cooley said.

Cooley also said that Mac-Gray Campus Solutions would have quicker maintenance response times in general; the company also provides laundry services to the University of Pittsburgh, meaning that there will be more technicians in the area at a moment's notice. "[Mac-Gray] has a lot more technicians in the area," Cooley said. "It's much more local. So we're hoping that when things do break — because machines do break - we'll be able to get a quicker response time."

Zhang finds collaboration easy at CMU

From AWARD, A1

applications that we haven't had a chance to work on vet."

Zhang grew up in China, where she attained her bachelor's degree in automotive engineering and her master's degree in engineering mechanics at Tsinghua University in Beijing. She then moved to the U.S. and earned a second master's degree in aerospace engineering and engineering mechanics and a Ph.D. in computational engineering and sciences from the University of Texas at Austin. She was then hired as an assistant professor at Carnegie Mellon, and is now an associate professor.

When asked why she chose to work at Carnegie Mellon, Zhang said, "CMU provides

a super interdisciplinary research environment. We are small, but sometimes small is beautiful. It provides a great place for interaction. You can easily talk to people, people

Zhang currently teaches courses about tional engineering methods, including 24-658: Computational Bio-Modeling and Visualization.

"CMU provides a super interdisciplinary research environment. We are small, but sometimes small is beautiful."

> – Jessica Zhang Mechanical Engineering Professor

here all are very friendly and easy to collaborate with. CMU is very high-quality; it has very high standards for

"I like to interact with students," she said. "Right now, computation skills are becoming more and more important for our engineering students."

Outside of university life, Zhang is married and has two daughters, one who is 8 years old and another who is 20 months old. Her husband works in the Genomics Proteomics Core lab at the University of Pittsburgh.

"Right now, my main hobby is playing with my children. [I enjoy] having time to take them places — to museums, to the science center, to the zoo," she said.

Zhang loves spending time with her family at the neighborhood's interesting and educational places, such as Phipps Conservatory and the Carnegie Museum of Natural History. Every year, Zhang also looks forward to taking her children to Spring Carnival.



Mac-Gray Campus Solutions offers systems that are both eco-friendly and have improved maintenance services.

WSP students gain internships

From WASHINGTON, A1

faculty shape students' experiences in Washington was an important factor in shaping WSP, which functions as to unique opportunities to a consortium along with the University of California campuses, University of Michigan, University of Pennsylvania, University of Notre Dame and the University of Sydney.

Shanley said, "Being a part of the consortium is like being a freshman all over again — it's new and exciting with so many interesting people to meet from all over the world. For example, in one of my classes, there are over 20 students from the University of Sydney; as a result, we're able to study our own political system while also learning about a completely different culture."

Skinner currently teaches the WSP policy forum course, which introduces students to national leaders in professional sectors such as media, the legislative branch of government, and other facets of Washington D.C.

Associate Dean of Undergraduate Studies Jay Devine teaches the WSP internship course, where he helps students connect their internship experience with their aca-

demic experience and think through professional development as well.

Only two weeks in, WSP students have been exposed meet with national leaders. and the weeks ahead are equally packed with events that include a private tour at the United States Holocaust Memorial Museum, a private tour of Capitol Hill, and a meeting with the former director of the C.I.A.

"The list goes on and on every week until the end of the semester; they'll have dedicated time to hear from a national thought leader or go on a private tour," Skinner

"I have to say my favorite part of the program has been the expansion of lessons beyond the classroom," Shanley said. "Merely two weeks into the semester and I've already had classes that have involved going to the National Portrait Gallery, meeting with the head of a think tank, and meeting with a famous presidential historian — next week I have a class scheduled to go to the White House. It's just been incredibly exciting to apply the material and the readings from class to current events and career paths,

all against the historical and political backdrop of our nation's capital."

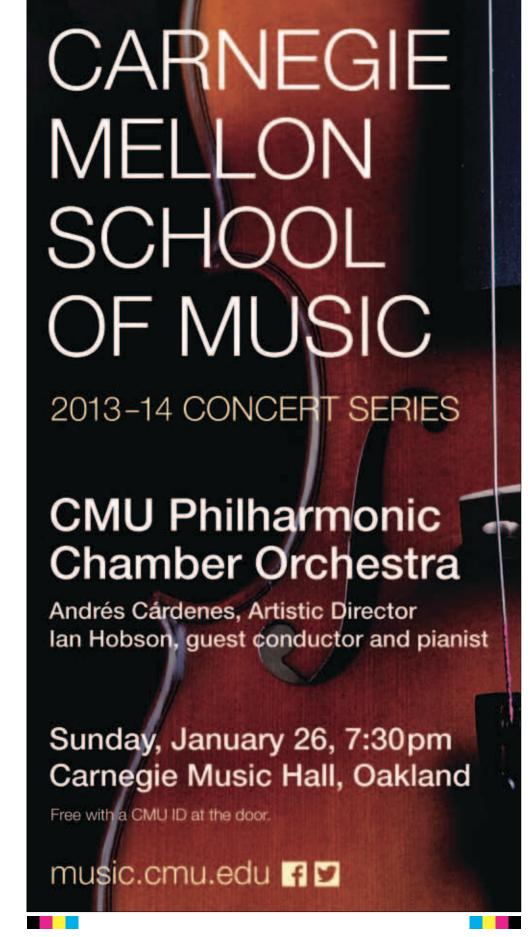
"Last week, in Policy Forum, we had the president of the Hudson Institute, Dr. Kenneth Weinstein, come to speak to us about think tanks and his own career path and by this week, we've all begun our internships," Hawker

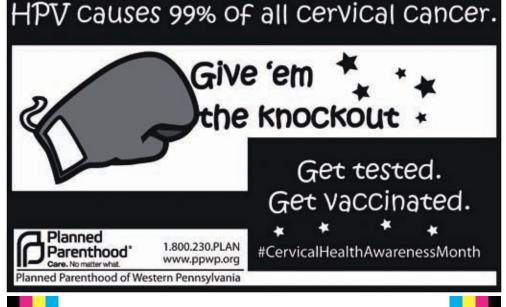
The WSP students are housed in a historical townhouse on Capitol Hill that was renovated as intern housing.

"We're living in a lovely townhouse, within two blocks of Capitol Hill and just beyond that, the National Mall. It's been incredibly fun and exciting exploring the city just outside our doorstep on the weekends," Shanley said.

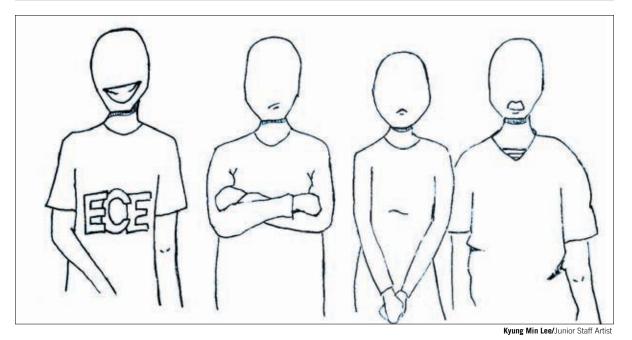
According to Skinner, the aim of the WSP is to have around 10 students go to Washington every semester.

"We hope to get students interested early enough to build their academic program around fitting the WSP into their course schedule," Skinner said. "I'm excited that we're doing it and I'm looking forward to having more cohorts of students to join because it's a great experience and they have access to so many national leaders."





FROM THE EDITORIAL BOARD



Build18 must supplement creativity with inclusivity

Some Carnegie Mellon students can find their majors restrictive and overly structured, but last week's Build Week, part of the ECE department's annual Build18 festival, was a commendable effort to give students a creative outlet for their engineering work.

According to a university press release, Build18 — now in its sixth year - showcases the work of 74 student teams. During Build Week, participants work together to produce a prototype of their projects. This year, the week culminated in a collection of group displays on Friday in Wiegand Gymnasium. The projects were innovative, ambitious, and diverse, including everything from a maildelivering blimp to an electronic tugof-war game.

While all Carnegie Mellon students are technically allowed to participate, according to the Pittsburgh Post-Gazette, participation is limited by the stipulation that every team must include at least one ECE major.

The Tartan applauds the ECE department for its efforts to foster student creativity, but suggests that the initiative could be strengthened and made more inclusive by expanding the participation criteria.

Build18 not only offers unstructured activity for students. It also allows them to apply principles they learn in the classroom to produce tangible results. As an educational experience, it is important for engineering students to think creatively about their course material and see the practical applications of their studies. Furthermore, the festival encourages students to have fun and be playful with their work in what is often a demanding program.

However, the initiative could be improved by eliminating the requirement of one ECE major per team. The skills of Carnegie Mellon students are so diverse across disciplines that there seems to be no convincing reason why the festival can't be as inclusive of students as possible.

Surely, the Build18 experience would be a positive one for any member of the student community. Regardless of their fields of study or affiliation with the ECE department, every student should be allowed to partake in Build18 and similar events that allow them to harness their skills and creativity.

Enforced net neutrality crucial to Internet freedom

Last week, the U.S. Court of Appeals for the District of Columbia Circuit overturned important components of the FCC's net neutrality regulations. Net neutrality is the principle that all data and content on the Internet should be treated equally and be available to any person with access to an Internet connection.

By striking down the FCC's protections for an open and equal Internet, the courts are allowing companies to make decisions about content availability that may negatively impact all of us.

If this court ruling stands, it would legally allow Internet service providers (ISPs) to restrict the websites you can visit and the speed at which they can send their data. For instance, it would be possible for a

site such as Netflix, and have Netflix offer streaming exclusively for its Internet customers or at a faster speed.

It is also possible that if the owner of an ISP had an objection to certain types of online material, those sites would then be blocked for their customers. This could have dangerous implications not only on free speech, but also on the availability of information on sensitive or controversial

ISPs such as Comcast and Verizon argue that since they pay for and manage the infrastructure through which consumers access the Internet, they have the right to make decisions about the content carried over these connections.

Some also say that if consumers do not like the content decisions being made by their ISP, they have the this opens up possibilities for collusion, as well as content restriction in rural areas. Due to the costs of creating the infrastructure for Internet connections, many rural areas may only have one ISP. If that ISP makes the decision to restrict certain content or block an online service, the people living in that area would have no ability to access those websites. It would also be very difficult for anyone to opt out of an ISP altogether.

Additionally, if major ISPs colluded to block a web service they found threatening or unappealing, many people would also be deprived of fair data access.

Data must be treated as free and equal on the web. Net neutrality is the best way to protect free speech and open content online, and this court ruling poses a significant threat to these rights.

single ISP to partner with a popular ability to switch providers. However, Open data ordinance means information awareness

Councilwoman Natalia Rudiak and Mayor Bill Peduto proposed the Open Data Ordinance last Tuesday, according to the Pittsburgh Post-Gazette. This legislation will publish municipal data to the public, most of which was available under Pennsylvania's Right to Know Law, but was extremely difficult to access.

The Right to Know Law essentially declares all municipal data public record, unless disclosure is prohibited by state or federal law, but does nothing to expedite the publication of that information. This new legislation ensures that the city government continually updates and publishes information about the city.

The Open Data Ordinance will cover a wide range of topics, such as paving schedules, building permits, and city budgets, according to the Pittsburgh Post-Gazette.

If the law passes, Pittsburgh will join 19 other cities that have already passed open data legislation in recent years. The project will be headed by Laura Meixell, who was hired specifically for this initiative, and will cost around \$100,000 in staff time, according to *PoliticsPa.com*.

Mayor Peduto has expressed his hope that Pittsburgh residents will use this information to develop web applications to improve life in the city and that city employees will use this data to do their jobs more efficiently.

Easily accessible data provides transparency for the residents of Pittsburgh, and allows data miners and social scientists to use the information for research projects. These projects can be beneficial to the city, as they locate and explore trends that may not be readily apparent.

Rudiak and Councilwoman Mayor Peduto's joint initiative follows Peduto's first executive order, which banned politicians from putting their names on any public property for political purposes, according to the Tribune-Review.

However, while Mayor Peduto's executive order could be read as an insubstantial gesture, the Open Data Ordinance has the potential to positively affect the lives of Pittsburgh citizens.

The Open Data Ordinance speaks to a desire on the part of local government for Pittsburgh residents to be informed about and involved in the process of government.

Both Councilwoman Rudiak and Mayor Peduto should be congratulated on their commitment to the increased well-being and awareness of Pittsburgh residents.

Net neutrality is not a friend to the Internet

KYLE HENSON

On the surface, net neutrality is a great idea. The free and open culture of the Internet is what makes it a beautiful thing, and price discrimination against users and websites would do terrible things to the blossoming Internet that we know and

While net neutrality guarantees that such price discrimination cannot happen, the market alone serves the same purpose. More importantly, however, net neutrality gives the government the ability to regulate the Internet — which is incredibly frightening.

Net neutrality refers to federal rules saying that Internet Service Providers (ISPs) can't do three things. They can't charge more for streaming a video on Netflix than for sending an email, even though more data is used. They also can't get around that rule by charging Netflix more money to provide streaming, and they can't team up with Netflix to make Netflix services function really quickly while its competitor Hulu functions slowly, or not at all.

That's why net neutrality seems awesome. The thought of an Internet where ISPs can price-discriminate and change up services on a whim frightens most people. However, to ensure net neutrality, the government — specifically the Federal Communications Commission (FCC) - needs to have power to regulate the Internet.

Last week, a court ruling stated that the FCC can regulate the Internet, but only in a certain way, because ISPs aren't classified as common carriers like landline phone companies are. Since ISPs can only be regulated in a certain way, the FCC does not have the power to enforce net neutrality.

The first part of that ruling should have Internet users trembling in their swivel chairs. Now the government can regulate the Internet in many important ways, but if they reclassify ISPs as common carriers, then the government's power over the Internet is nearly limitless.

Now remember, this government is the same body that launched the dreadful healthcare.gov website that failed to work and still isn't securely or accurately sending data to healthcare companies.

Let's face it: the government isn't very good at computers. According to Vanity Fair, for every person under 30 who worked on healthcare. gov, there were 10 people over 50 working on it. Think about that. For every brilliant Carnegie Mellon computer science major, there were 10 of your dad creating our national healthcare system.

Plus, it's not like incompetence is the only problem with the government. Keep in mind that this is the same government that lied to us about Watergate, Vietnam, and the National Security Agency (NSA), among others. We cannot trust the government to do what it says it's doing, and giving it more power over the Internet is a recipe for eventual disaster.

Speaking of the NSA, do we really want the government — the one that's been using big companies like Google and Facebook to retrieve personal data — to have even more control over ISPs? Google and Facebook only have what consumers choose to give them. ISPs control all of the data that's sent over the Internet. The Internet has paved the way for Big Brother, and giving the government more power over personal data isn't the way to push Orwell's dystopian future further away from our reality.

As if incompetence, deceit, and mass surveillance weren't the only problems, we need to keep in mind that a little power only grows. When was the last time a government program got smaller? Net neutrality is just the beginning. Gradually the government will gain more power over the Internet; power corrupts. The more power put in the hands of more people, the more likely it is to be abused. People who want to keep the Internet free and open shouldn't want it to be susceptible to government abuse.

Finally, the goals of net neutrality can be accomplished by the market. Imagine the outrage if people had to pay Comcast an extra fee to access Netflix. The boycotts would be unreal. Remember the Stop Online Piracy Act and the PROTECT IP Act, otherwise known as SOPA and PIPA, respectively? To protest those acts, Google went black for a day and people around the world vehemently protested. There's absolutely no way the world would be okay with ISPs discriminating against users, and even if ISPs do, at least there are options. If Comcast starts being mean, people can always switch to Verizon. If Verizon isn't in the area, it probably will be soon because Verizon knows that people want Netflix, and they don't want to pay extra for the streaming service.

When the government is calling the shots, there is only one option. Unfortunately, the government does not have to compete, so it isn't susceptible to the benefits of a good, old-fashioned tussle in the free market. If Verizon and Comcast start being mean together, there are antitrust laws to stop their collusion. There does not need to be extra legislation for that. We can already regulate them as companies doing bad things, rather than ISPs doing bad things.

Even if worst comes to worst and ISPs can price-discriminate, economics teach that price discrimination is actually a good thing, which makes markets more efficient.

Nobody will pay more for Internet than they currently do because the market has already settled on a sustainable clearing price for free, unlimited Internet, and competition will keep it that way. However, companies may start to offer budget Internet, a cheap alternative for people who only need to do basic things. My grandmother doesn't need the capability to play World of Warcraft with people in Russia when she still thinks that everybody's email address is yourfullname@hotmail.com. The absence of net neutrality might actually pave the way for cheaper, more accessible Internet.

The Internet should remain the free, open, and innovative tool that it is. It has increased productivity and united long-lost family members. Though net neutrality is well-intentioned, the nightmare scenarios for government authority to regulate the Internet are limitless. The Internet is perfectly safe in the invisible hands of the market. Let's keep it that way.

Kyle Henson (kahenson@) is a staffwriter for The Tartan.

Editorial Board

RACHEL COHEN* Publisher

BRADEN KELNER* Editor-in-Chief

Editorial Staff

LAURA SCHERB Operations Manager NÖEL UM News Co-Editor BRIAN TRIMBOLI News Co-Editor **BROOKE KUEI** SciTech Editor **JOEY PEISER**

Pillbox Editor

ARIEL HOFFMAIER Forum Editor

KATE GROSCHNER* Staff Photographer

MARYYANN LANDLORD Comics Editor JONATHAN LEUNG MICHELLE WAN

Art Editor MAIRÉAD PETTIT Personnel Manager WILL CRICHTON Systems Manager

EVAN KAHN

SWATHI ANAND

Layout Manager

Copy Manager

Advertising Manager

Business Manager

BENJAMIN CHANG Asst. Business Manager

JAMES WU

JOHN HUO

DESIREE XU

Asst. Copy Manager **CHLOE THOMPSON** Staffwriter

BRENT HEARD * Senior Staffwriter

HANNAH DELLABELLA Asst. Copy Manager **ROBERT MARATOS**

ROHAN VARMA Asst. SciTech Editor

* Denotes executive committee member

Staff

SENIOR STAFF Greg Hanneman, Carl Glazer

Lula Beresford-Banker, Amelia Britton, Matt Brown, Connie Chan, Nivedita Chopra, Gordon Estes, Blaine Greenberg, Katherine Huang, Karyn Michela, Angela Liu, Satvika Neti, Mackenzie Nicholson, Stephanie Stern

Manali Banjeree, Jenna Bodnar, Yong Gun Choe, Anne-Sophie Kim, Mina Kim

ADVERTISING

Alison Chiu, Anuva Kulkarni, Kyle Henson

© 2014 **The Tartan**, all rights reserved.

Library of Congress ISSN: 0890-3107

THE TARTAN



The Tartan is a student newspaper at Carnegie Mellon University, funded in part by the student activities fee. It is a weekly publication by students during the fall and spring semesters, printed by Trib Total Media. The Tartan is not an official publication of Carnegie Mellon University.

The **Editorials** appearing at the beginning of the opinion section are the official opinion of **The** Tartan Editorial Board, Columns, Editorial Cartoons, and Reviews are the opinions of their

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

Office: University Center 314 Fax: (412) 268-1596 Web: www.thetartan.org E-mail: contact@thetartan.org The Tartan
Box 119, UC Suite 103 5000 Forbes Avenue Pittsburgh, PA 15213

Movement toward medical cannabis legalization a positive step for PA

Brandon Schunck

BRANDON SCHMUCK

While the United States has historically taken a somewhat totalitarian approach to drugs — what many call the War on Drugs — this inflexibility is beginning to change.

According to *USA Today*, 20 states and Washington D.C. have already legalized medical cannabis. This fact may indicate that state governments are now realizing the benefits legalized marijuana could provide, instead of continuing to imprison people for relieving symptoms of illness with a substance that CNN describes as "safer than alcohol." In light of a bill that was introduced to the Pennsylvania Senate on Tuesday, the Senate may finally take the right direction toward legalizing cannabis.

Senators Daylin Leach (D–Pa.) and Mike Folmer (R–Pa.) put aside their differences to introduce Senate Bill 1182, the Compassionate Use of Medical Cannabis Act, which would allow physicians to recommend

marijuana for medical use. If Pennsylvania Senators allow patients to have access to medical cannabis, it will improve both medical and civil rights. Meanwhile, the number of people imprisoned for putting substances into their body will decrease.

Cannabis offers real benefits to patients, according to the *International Business Times*. These benefits include preventing Alzheimer's disease, controlling epileptic seizures, easing multiple sclerosis pain, and even inhibiting tumor growth and relieving nausea in cancer patients.

Additionally, no one has ever died from a marijuana overdose. As Dr. Lester Grinspoon of Harvard Medical School stated to the *International Business Times*, "There are no deaths from cannabis use. Anywhere. You can't find one." According to Dr. Paul Hornby, also speaking to the *International Business Times*, one would have to smoke 15,000 joints in 20 minutes to ingest a toxic level of delta-9 tetrahydrocannibinol.

Due to the benefits and safety of medical cannabis, its legalization should be a no-brainer. However, there is one brick wall that stands between patients and their relief: Republican Governor Tom Corbett. He has continually expressed his opposition to the legalization of medical cannabis, saying at an event in Mt. Lebanon, "We must look to see where the FDA is on this before we consider anything beyond that."

Due to the fact that medical marijuana is still illegal on the federal level, there is little to no chance of formal FDA approval happening anytime soon.

According to Senator Folmer in a statement to the press, "Some forms of medical cannabis are an extract that is ingested, not smoked, and have no psychoactive effects." Therefore, using medical marijuana to relieve medical conditions is no worse than using prescription drugs. In fact, in some cases, it is a safer, less addictive alternative.

Much of the country continues to carry an unfounded fear of cannabis and its potential negative effects. However, the country's citizens must move forward and put medical benefits before prohibition-style legislation

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



Joanne Lo/Junior Artist

Fitness trackers more than just a trend

Braden Kelner

BRADEN KELNER

Wearable technology made its mark on the 2014 International Consumer Electronics Show (CES) from Jan. 7–10 in Las Vegas. Among the notable wearables were smart glasses, smart watches, and smart earbuds — made by Intel and fitted with heart-rate monitors. Wearable technology has become increasingly popular due to tests and launches of notable gadgets such as the Pebble Smartwatch and Google Glass last

Technology-loaded watches and glasses are not the only players in the wearable technology space, though. Fitness trackers, usually worn around the wrist, have risen in popularity over the past year.

Nike, Inc. recently updated its fitness-tracker line with the second iteration of its Nike+ FuelBand, called the Nike+ FuelBand SE. Meanwhile, Fitbit, Inc. released its first wrist fitness trackers, the Fitbit Flex and Fitbit Force, in 2013. Though the functions that these products tout

are impressive, many of these fitness trackers seem incomplete.

Nevertheless, they are here to stay, and their popularity will surely increase as technology companies round out the gadgets to perform a wider range of functions.

Currently, many available fitness trackers have limited functionality and are tied closely to smartphone applications. For example, the Sony SmartBand, shown at CES 2014, relies on its Lifelog application to record information about physical activity and show that information to the user. The fitness tracker itself lacks a screen, making it impossible for users to view basic information about their activity, such as how far they ran, on their wrists.

Furthermore, some trackers — like the Sony SmartBand and the Razer Nabu — do not provide certain expected and essential functions, such as the time of day.

As fitness-tracker producers continue to gauge what their users want, they would be wise to provide updated versions that move their products closer to being all-in-one devices, as smartphones function for many people.

The Razer Nabu already allows users to see text messages, emails, and calls — a function that was

once unique to smart watches. As fitness-tracker producers expand the capabilities of their products, the devices may merge with smart watches until they perform almost the same functions.

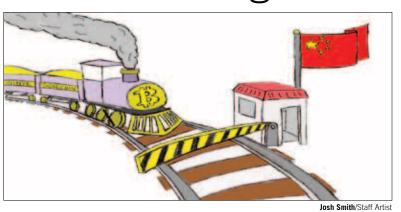
Why not consider them one category of devices, then? Whereas smart watches tend to be larger, fitness bands must provide similar functions on smaller viewing areas for more streamlined devices that do not interfere during workouts. Fitness trackers have the capability to not only provide functions similar to those of smart watches, but also present those functions in a sleeker manner — a feature athletes may

Until wearable wrist technology provides a range of capabilities like those currently fragmented between smart watches and fitness trackers, they will not be effectively marketed as mainstream products. People have come to expect their devices to do everything.

Although fitness trackers do not fulfill these expectations now, they will not die out. Instead, their producers will continue to perfect them until they are worn on every wrist.

Braden Kelner (bik@) is editor-inchief of The Tartan.

Bitcoin requires wider use without regulation



Justingan

In December, China clamped down on the Bitcoin movement, prompting many Chinese financial institutions and websites to stop using the currency as payment. Bitcoins are a great idea — an international e-currency that cuts out middlemen, protects consumers and benefits producers. The only problem is that some governments believe they are perfect for criminal activity and provide a whole new landscape to criminals interested in money laundering or fraud. If Bitcoins are ever embraced on a larger scale, governments need to provide the right amount of regulation to catch crime, while also encouraging the use of Bitcoins to reap the benefits of the currency.

Bitcoins have been quite the craze lately, as they have many attractive and often lucrative aspects. First, there's the secretive, anonymous coder who uses the pseudonym Satoshi Nakamoto, whose idea for virtual currency stemmed from a distrust of monetary systems in the 2008 economic crisis. No one really knows Nakamoto, and the coins' creator has only communicated with certain members of the Bitcoin community. Slowly but surely, Bitcoin has gained prominence and its value has since skyrocketed.

A second attractive aspect of Bitcoin is that users can cut out greedy middlemen in transactions, allowing consumers to directly transact with producers. Third, and quite bluntly, the value of Bitcoins have slingshotted into space, with some worth more than \$800 each as of Jan. 16, according to Bitcoin Charts, depending on which exchange is used.

Finally, many see Bitcoin as the future's currency and, perhaps, as the criminal's dream. The Bitcoin's anonymity and lack of regulation give money launderers the perfect vehicle to shuffle large amounts of money around, in theory.

This final characteristic of Bitcoin was one of the main concerns that lawmakers and enforcers had when Bitcoin became a trending topic online. Theoretically, money can be stored by buying Bitcoins with cash, and storing Bitcoins in virtual wallets gives criminals increased mobility to move their funds and use them cleanly. On the other hand, Bitcoins aren't private; transactions can be traced via the Bitcoin peer-to-peer network and, although it is possible to see where Bitcoins change hands, it is not possible to concretely find an

individual behind a transaction.

However, in order to liquidate the Bitcoin, most exchanges require some sort of identification. This caveat creates just as much hassle for any money launderer using cash in an attempt to escape taxation or the authorities. In fact, according to Jennifer Shasky Calvery, director of the Treasury Department's Financial Crimes Enforcement Network, in an interview with The New York Times, cash is still preferable to Bitcoins for criminals. Bitcoins don't have a high enough transaction volume to act as a camouflage for money launderers using the currency to store their money. Also, considering the amount of volatility in large amounts of Bitcoin, criminals have a lot to lose if they try to money launder with Bitcoins.

China, the world's second largest economy, is trying to cut its losses in the case that Bitcoin's fortunes deteriorate. According to Forbes Magazine, the Bitcoin's rise in value can be traced, to an extent, back to China's rising use of the currency. Additionally, according to The New York Times, Bitcoin is "essentially a kind of special virtual commodity." The fact that Bitcoin has no intrinsic value like gold or silver, and no government to back it up, makes it a currency based on speculation from users.

China is perhaps making a move to stop Bitcoin from being used in ordinary places like restaurants or even online stores, and by extension, trying to stop any financial dependence on a potential Bitcoin bubble. The Bitcoin will be hard to stabilize, especially considering how decentralized it is without a controlling body.

Even though operating without a controlling body is perhaps the entire point of the Bitcoin, inflation of the currency is not controlled in the same way U.S. dollars are. Steady prices are a driving factor for consumers to consume. If Bitcoins become more popular and their prices swing radically up and down during short periods of time, as they are prone to do, small businesses, like restaurants, won't be able to cope.

In the end, the Bitcoin remains a new idea and a symbol that our financial systems need a revamp, but it is nowhere near flawless. If people were to use it widely, they would provide criminals with the perfect circumstances to launder money and commit fraud. However, if Bitcoin is over-regulated, its entire purpose as a perfect floating currency will be for nothing as consumer use diminishes.

Justin Yan (jky@) is a staffwriter for The Tartan.

A PERSON'S OPINION

The Tartan is starting the new term this week. So we asked,

What were you most looking forward to coming back to at school?



Alex Frieder CS, Cognitive Science First-year

"Seeing all my friends again!"



Laura Caton
Technical Writing
Sophomore

"Excited for crew and to see Gujri!"



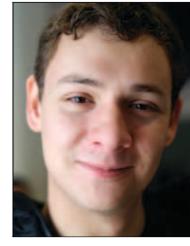
Tim BrooksPhysics
First-year

"SAE!"



Mykaya Nixon ChemE Senior

"Finishing up strong! It's my last semester..."



Ben Perlin BME, ECE First-year

"I ran out of things to do over break."

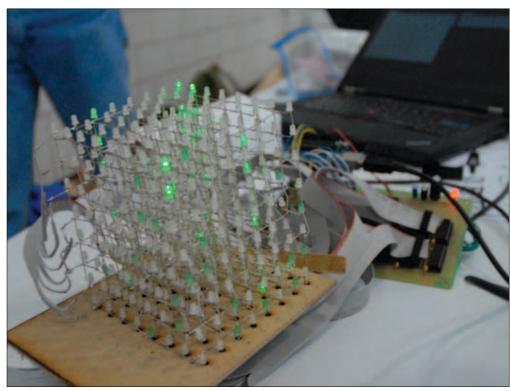
The Tartan » January 20, 2014 A6 « thetartan.org/scitech

Science & Technology

Build18 engineering fair highlights CMU students' creativity









Clockwise from top left: Austin McCasland rides Pittsburgh Art on Wheels. Eli Murphy-Trotzky shows off his Wikipedia Watch. Close-up of Wikipedia Watch. LED Cube Games is programmed for games such as Snake.

KATE GROSCHNER

After a week of work, students who participated in the Build18 engineering festival met in Wiegand Gym this Friday to display their creations. Build18 is an annual event held by the electrical and computer engineering (ECE) department, in which teams of students are given one week and \$250 to build anything from 3-D printers to remotecontrol buggies. Sponsored by over 15 companies, most notably General Motors and Boeing, the festival is in its sixth year, with 75 teams participating. Any student can participate as long as at least one member of their team is an ECE major, according to an article published in the Pittsburgh Post-Gazette. Below are descriptions of a few select projects that appeared during this year's event.

Pittsburgh Art on Wheels (PAW)

Members: Junior ECE major Spencer Barton, music and technology master's student Muhammad Haris Usmani, HCI master's students Austin McCasland and Andre Le, and Tangible Interaction Design master's students Mauricio Contreras Hernandez and Jake Marsico.

Description: Inspired by a project by assistant professor of art Ali Momeni, the members of Pittsburgh Art on Wheels created an enhanced bicycle that has the ability to project the view from behind the rider onto the pavement in front of the bicycle. This tricked-out ride also includes a proximity detector near the back bumper to detect vehicles that approach from behind. The creators touted features like a game where the tilt of the handlebars controls vir-

the rider steer straight, as well as a router to make the bicycle a Wi-Fi hotspot. Barton says that future improvements to the bicycle will include scaling the size of the components, such as the front projector, to reduce weight and give the bicycle better balance.

Wikipedia Watch

Members: Senior ECE majors Eli Murphy-Trotzky and Pronoy Biswas.

Description: For this year's Build18, Murphy-Trotzky and Biswas developed the Wikipedia Watch, which has an e-ink LCD hybrid display and uses Morse code to search for Wikipedia articles. The team decided to use Morse code not only to eliminate the need for a keyboard, but also for the technological challenge. Murphy-Trotzky said that in order for the Morse code feature to work, he and Biswas had to program the watch to be able to learn what constitutes a dot or a dash for individual users. Users do not have to memorize Morse code; the home screen displays both the time and cipher, providing the Morse code for each letter. The watch also has an accelerometer so that users can simply tilt the watch to scroll through an article. The watch's creators plan for the Wikipedia Watch to have an SD card with all of Wikipedia's web pages stored in text files. Due to difficulties with the SD card reader, only a subset of Wikipedia was stored on the watch for demo day, but the watch was still completely functional.

Remote-Control Buggy

Members: Senior mechanical engineering major Carl Curran, senior ECE major Haley Dalzell, sophomore ECE and robotics double major Zachary Dawson, junior ECE

ECE and engineering and public policy double major Ian

Description: The future of Sweepstakes was presented at this year's Build18 with a remote-control buggy that requires a remote control operator rather than a driver. The team behind this project is using remote-control operation as the first step in creating a completely autonomous buggy. Dalzell, a team leader on the project, says the idea of an autonomous buggy has been around for about 13 years. However, previous attempts to create a self-driving buggy failed, in part because previous designs relied solely on cameras and image processing to direct the buggy. The current team is hoping to fix those issues by having the buggy use an RTK-GPS system that uses two GPS receivers, one fixed and one moving. This allows for the location to be calculated to within six inches, whereas a normal GPS has an accuracy of three feet. Dalzell says that the team is discussing with the Sweepstakes Committee the possibility of having the buggy debut in an exhibition race this year.

LED Cube Games

Members: Junior computer science major Tommy Klein, junior ECE major Kevin Dou, and junior math major Zack Greenberg.

Description: The members behind LED Cube Games built upon their 2013 Build18 project by trying to implement a version of the popular game of Snake on an LED cube. The members built the LED cube by connecting rows and columns of LEDs. An Arduino microcontroller — a tiny computer on a single integrated circuit that uses open-source hardware — was then used to

lights up a specific LED, much ing why certain LEDs failed to the cube to have various light-Cartesian coordinate system. The group's biggest challenge by demo day due to hardware running.

tual box stacking that helps major Matt Sebek, and junior select a row and column that was debugging and determinissues, the team did program of Snake was not operational

like specifying a point by a light up. Though the full game ing effects and was able to get the Python code for Snake



Carl Curran, Haley Dalzell, Zachary Dawson, Matt Sebek, and Ian Hartwig built a remote-control buggy.

CMU alumna publishes children's book teaching binary

BROOKE KUEI SciTech Editor

Meet JSON and WiFi, two fictional robot brothers created by Lisa Seacat DeLuca, a Carnegie Mellon alumna who graduated in 2005 with a degree in computer science. Now a software engineer at IBM, DeLuca is also a mother of twin boys and the author of A Robot Story, a children's animated eBook and board book

that teaches the fundamentals

of binary. A Robot Story is a children's book written in a rhyming, sing-song voice about two robot brothers who are taught how to count to 10 in binary by their mother. DeLuca began writing the book last September and currently endeavors to receive funding through a campaign on Kickstarter, a website that allows innovators to promote their respective projects.

Through Kickstarter, a project creator sets a funding goal and a project deadline. Backers who are interested in seeing the project come to fruition donate money. If the funding goal is reached by the project deadline, Kickstarter will fund the project. The Kickstarter website for DeLuca's book can be found at www.arobotstory.com. The project deadline is Feb. 1.

"When I was at Carnegie Mellon, I had to learn binary for computer science and I knew what powers were, obviously, but I didn't really understand the powers of two in binary and how important they were in computer languages," DeLuca explained. "I always

have a 'how to count to 10 in binary' kind of book for children and I just had twin boys a year ago, so I decided to write it!" DeLuca cites statistics on her Kickstarter website that emphasize how computer science is becoming an increasingly essential part of our lives and a large part of our children's futures. "Children are genetically programmed to learn language, so why not start them early?" DeLuca stated on her website.

A Robot Story will use an on and off switch to represent 1s and 0s, the building blocks of binary. In the eBook version, young children will be able to turn these switches on and off to see how the animations on the page change with each different input. Each page will include four switches, and on the last page, the readers will be able to change more than four switches at once and observe how having more 0s and 1s allows for the conversion of a decimal equivalent beyond just zero to 10.

The process of creating this animated eBook is more complicated than it may seem. Illustrations of the robot characters were done by Constantine Petkun, a freelance illustrator from Latvia. She created these illustrations in Adobe Illustrator and created the animations using Adobe After Effects. However, because DeLuca wanted the book to be interactive, she could not simply export these animations as movie files. "When a user clicks on a certain part of the screen, I wanted only that

thought it would be cool to play a single file," DeLuca explained. "So for that reason, I had to break the big animation up into a bunch of smaller animations and the best method I found to animate the smaller items was PNG sequences." Once the animations were broken down into individual PNG files, she could make them appear animated using JavaScript and CSS.

> "It's pretty cool because when I was looking to do this, I couldn't really find any resources on anyone who had done something similar," De-Luca said. "So hopefully this will help other people make more animated eBooks." According to the Kickstarter page for A Robot Story, DeLuca will upload a video that explains the animation process in greater detail, as a reward to her backers for helping her reach \$5,000.

Another interesting aspect of DeLuca's project is the open source technology that the book is made with, called Apache Cordova. This technology is a set of device APIs (application programming interface), which allow someone who is developing a mobile app to build the app without using any native code, such as Java or Objective-C. Instead, the app can be created using just HTML, CSS, and JavaScript. "I'm actually a committer for Apache Cordova," De-Luca said. "As part of my day job at IBM, I get to work with open source technologies, and Cordova is one of them. As a committer, I'm able to influence the project and deliver changes without the typical

requires an extensive comprehension of computer science to produce, it teaches children

simplistically. It is the first book of its kind on the market, and it is only fitting that an

Even though A Robot Story how to count to 10 in binary alumna of Carnegie Mellon's renowned computer science program would be the one to write it.



Lisa Seacat DeLuca and her twin boys pose alongside the characters of her children's book, A Robot Story.

SCITECH BRIEFS

Study shows that caffeine may help short-term memory

A recent study by researchers at Johns Hopkins University suggests that consuming some coffee may improve the ability to retain information. One hundred sixty participants were assigned to look at pictures of various objects and were then given either a caffeine pill or a placebo. The next day, participants were given another set of pictures that included images similar, but not identical, to those of the previous day, and told to assign the pictures as old, new, or similar. Those that received the caffeine boost were more likely to correctly identify images as similar, rather than identical, to pictures from the previous day. Previous studies that did not find a relation between caffeine intake and memory may have been due to participants consuming caffeine before the information was learned.

Source: Science News

Chimps use hand gestures as a way of communication

part to animate, rather than

Researchers at Georgia State University have found that two language-trained chimpanzees can communicate with humans to find food. For the experiment, the team of researchers placed food in an outdoor area. The chimpanzee was forced to aid a human participant who did not know the location of the hidden food to find it, using whatever method the chimp chose to communicate. The researchers found that the chimpanzee used gestures such as pointing to help the human participant find food.

The study is the first indication that chimpanzees are capable of pointing and using gestures to coordinate with others toward achieving goals. Researchers believe that using gestures may have been an important step in the evolution of language.

Source: ScienceDaily

First discovery of black hole orbiting spinning star

review stream."

A team of Spanish scientists were the first to discover an instance of a black hole orbiting what is known as a spinning star. The discovery was made using the Liverpool and Mercator telescopes in the Canary Islands. Spinning stars — also known as Be-type stars — are known for rotating very fast. "It's like they were cosmic spinning tops," said Jorge Casares, the lead author of the Nature paper in which the discovery is published. The newly-discovered black hole that rotates the Be-wtype star is in the Lacerta constellation and is approximately 8500 lightyears from Earth. The Be-type star has a surface speed of over 1 million kilometers per hour.

The black hole is fed by matter that is ejected from the Be-type star.

Source: ScienceDaily

Portable brain scanner used with smartphone device

The Bhutan Epilepsy Project — a program funded by the Canadian government aims to use an Android application to diagnose epilepsy for those in developing nations. Scientists at the Technical University of Denmark have created a portable brain scanner that consists of an electrode skullcap attached to a smartphone. The device should be able to perform electroen-

cephalograms (EEGs). The device is in clinical trials in the United States and Denmark. The readings from the portable EEG will be calibrated with results from standard EEG equipment. Once the trials are complete, the team will work with professionals in Bhutan to implement the portable EEG. Researchers stress that professionals in Bhutan also need to be trained on how to read the EEGs.

Source: New Scientist

Bacterium may positively influence newborn behavior

Researchers in Italy have found that newborns that take drops containing a beneficial bacterium cry less than babies who do not. Although the cause of excessive crying in infants is unknown, this study suggests that microbes in the baby's gut may be a factor. In the study, the researchers randomly assigned 589 newborns to either receive a probiotic supplement or a placebo. The supplement contained the microbe Lactobacillus reuteri, which has been shown to im-

prove intestinal function. Parents delivered the drops and recorded their infant's behavior in a journal. Infants receiving the probiotic supplement cried for an average of 38 minutes a day, while those receiving the placebo cried on average for 71 minutes.

Source: Science News

Chemical spill leaves residents without clean water

Tanks at a chemical company in West Virginia named Freedom Industries burst on January 9. The tanks spilled the chemical 4-methylcyclohexane methanol, known as MCHM, into the river near Charleston. Inspectors estimate that approximately 7,500 gallons of the agents spilled into the Elk River and left more than 300 thousand residents without drinking water. The governor declared a state of emergency and schools and eateries were forced to close.

Not much is known about the health affects of MCHM, a solvent used to wash coal. Residents couldn't bathe, drink water, or wash their clothes. Boiling water was not an effective method to purify the water.

Source: Los Angeles Times

Compiled By **MICHAEL SETZER**

JOK WHAT'S HAPPENING



Land the job of your dreams with Macy's Dress for Success Workshop! Macy's at The Waterfront

Saturday, January 25 at 1-5pm

Make a fashionable start! Interviewing is all about first impressions, and at Macy's we're ready to help you bring out your best. Come to our Dress for Success Workshop to get styling tips from our experts on how to pull together the perfect look to nail any interview. Enjoy light refreshments and a visitor's pass good for 10% off every purchase made during the event, so don't miss out!

Follow us on Twitter @macysevents



Events subject to change or cancellation.

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

Undergraduate summer employment at Carnegie Mellon University is available with the Pennsylvania Governor's School for the Sciences (PGSS). The PGSS is a five-week summer school for extremely talented high school students from Pennsylvania, Teaching Assistant/Counselor appointments are available in the areas of biology, chemistry, computer science, physics and mathematics. Academic duties of the TA/Counselor include assisting with lecture and lab courses and mentoring team research projects. Counselor duties of the TA/Counselor include living in the same dormitory as the PGSS students, ensuring that students adhere to the PGSS disciplinary rules, providing tutorial help in the academic program, and arranging and conducting social activities.

Applicants should have finished their sophomore year by the start of the program. Preference will be given to applicants with strong academic records and strong social skills. Prior experience with PGSS or a similar summer program is preferred, but not required. Further information is available at the PGSS web site: www-pgss.mcs.cmu.edu.

> Stipend for five-and-one-half week period: \$2,250 for new TA/Counselors, \$2,500 for returning TA/Counselors

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

TA/Counselor duties begin Wednesday, June 25, 2014, end Sunday, August 3, 2014.

Applications are available from the PGSS Office in DH A301 or may be downloaded (pdf format) from the PGSS web site: www-pgss.mcs.cmu.edu

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

(Applications may be accepted after the deadline until all positions are filled.)

Application Deadline: March 1, 2014

A8 « thetartan.org/scitech The Tartan » January 20, 2014

CHIMP wins third at **DARPA** competition





Top: CHIMP's design allows it to do task humans cannot. Bottom: The Tartan Rescue Team poses with its third-place robot, CHIMP.

ROHAN VARMA

Staffwriter

The Tartan Rescue Team from Carnegie Mellon University's National Robotics Engineering Center recently placed third at a robots skill challenge, winning one million dollars in the process. The competition was hosted by the Defense Advanced Research Projects Agency (DARPA) to spur innovation in robotics technology that will be useful in natural and man-made disasters

David Stager, a senior commercialization specialist at the Robotics Institute at Carnegie Mellon University and a part of the Tartan Rescue Team, said in an email, "The challenges during the trial were focused on industrial accidents like the Fukushima disaster where robots that would have been able to hook up fire hoses and turn valves would have averted some of the cascade of failures. Basically robots that can go work in radiation or other hazardous environments will save

the lives of rescue personnel, as well as reduce downstream impact."

The Tartan Rescue Team entered the competition with a four-limbed robot called the CMU Highly Intelligent Mobile Platform, better known as CHIMP. This robot is 5' 2" tall and has a hefty weight of 400 pounds. Despite its short stature, however, CHIMP has a massive wingspan of 10 feet that allows it to complete tasks that human beings are not physically capable of do-

In addition to being visually large, CHIMP is also immensely fit. "CHIMP's motors are actually quite strong and fast," Stager said. "For instance, the shoulder motor can lift 200 pounds at arm's length. During the competition, we ran the robot very slowly to be cautious, but we intend to speed up actuation over the coming year as we get more comfortable with the software."

CHIMP scored 18 out of a possible 32 points in the competition and finished third in

the rankings out of 16 total entries. It excelled at removing debris from a scene, cutting a hole through a wall, and closing a series of valves. It received a perfect score on all of these tests and proved just how useful it could be in a disaster situation where these basic skills would be invaluable.

Tony Stentz, a researcher at the Robotics Institute at Carnegie Mellon University, said in an email, "We needed to build a robot with near-human form so that it would fit in places designed for humans and would be able to do human tasks "

One of the key design traits of CHIMP is its mobility through two track wheels on its feet. The researchers chose to use wheeled platforms instead of an actual pair of feet to obtain better balance. "We wanted to avoid the complex control problem of balancing a bipedal robot, so we selected a design that is statically stable," Stentz said.

DARPA has a history of supporting robotics at Carnegie Mellon — in fact, CHIMP

was developed with three million dollars in DARPA grants. After doing so well at the tournament, the Tartan Rescue Team is going to receive an additional one million dollar award for research from DARPA. The team intends to utilize this money to continue to mature the technology for future use by industrial and governmental programs.

With a large team of about 50 researchers working on the project, this additional prize money will go a long way in helping the team develop CHIMP further. "We have a very large team working on many exciting technologies and this research and development work is fairly expensive to support. We are still seeking major contributors with a goal to reach five million dollars in sponsorship," Stager said.

The Tartan Rescue Team was able to design and assemble CHIMP in a little over a year. At such a fast pace, a robot from Carnegie Mellon may soon be saving lives in disasters in the next few years.

HOW THINGS WORK

Autonomous cars sharing the roads

NIHARIKA SINGH Staffwriter

As technology advances, more machines are gaining capabilities that have been previously seen only in science fiction. One of the most prominent examples of these machines is self-driving cars. Despite how complicated and dangerous the technology sounds, in practice, it is perfectly feasible and close to becoming a reality.

Self-driving cars are being developed by universities like Carnegie Mellon and companies like Google. Self-driving cars have several potential advantages over human-operated cars: Discovery News points out that robotic cars could make travel more efficient since the cars can be precisely driven to optimize fuel usage. Travel would also become safer since selfdriving cars would not commit errors due to tiredness or the slow reflex times of humans. Furthermore, there is the possibility of creating a network of cars that can communicate to reduce traffic congestion. Self-driving cars could also provide mobility to people that cannot currently drive due to disabilities.

Self-driving cars rely on several different technologies to perform safely and reliably. Google's self-driving car, for instance, has a 64beam laser on its roof that generates a 3-D map of its environment. The map produced by this laser is then combined with maps already stored in the car's memory to construct a virtual model of its surroundings. This combined map is used to navigate the environment.

The car has several other

sensors that allow it to perform normal driving functions. For example, radars on its bumpers let it detect traffic speeds and adjust its own speed accordingly. A forward-facing camera lets the car detect and follow traffic lights.

Several other internal sensors like a GPS and wheel encoder let the car monitor its own movements and ensure that it moves as its algorithms predict. Using this technology, Google's selfdriving Toyota Priuses have driven more than 190,000 miles.

California, Nevada, and Florida all now allow selfdriving cars on roads. However, humans are required to be in the cars while they operate. Even though completely automated cars are not yet allowed to operate without intervention on roads, the technology developed for self-driving cars is slowly making its way into its standard counterparts. Several features in new cars, like adaptive cruise control, automated braking, and selfparking, have been adapted from research that was done while developing self-driving

One of the major obstacles standing in the way of the popularity of self-driving cars is the difficulty these cars could cause lawmakers and insurers. Despite the rapid progression of this technology, issues still exist, such as who would be responsible in an accident involving two automated cars. The benefits these cars offer may outweigh the issues though, and self-driving cars could soon share the road with ordinary human drivers.



2014 Orientation Counselor Staff Application Process

General Roles and Expectations

- ·Be available for trainings and throughout Orientation Week
- Understand the role Orientation plays in the lives of new students
- Serve as mentor and academic and social role model for first year students
- Have the ability to see things from the perspective of our new students, their family and guests
- Exhibit the ability to work effectively with a diverse group of team members
- Value differences in others and promote an understanding of respect for various opinions, values and cultural backgrounds
- Communicate accurate information to new students about resources, policies & regulations.
- Work collaboratively with Residence Life Staff, Housefellow staff and other members of the Division of Student Affairs
- Facilitate and lead small group discussions
- Represent Carnegie Mellon before student organizations, faculty, campus departments. administrators, alumni, new students and their families
- Promote the cultural, academic, social, recreational & spiritual opportunities available in Pittsburgh
- Orientation Counselors must have a 2.50 cumulative QPA and be an enrolled undergraduate or graduate student for Fall 2014.

For questions, contact, Anne Witchner, Director of Orientation x84886 or aw0w@andrew.cmu.edu

Applications will be available on line on February 1. You will be able to access the application http://www.studentaffairs.cmu.edu/first-year/oc/

The application deadline is Friday, February 21, 2014.

2014 Timeline

Tuesday, January 21 Information Session

7:00pm -7:45pm Dowd Room, University Center

Monday, January 27 Information Session

> 6:00pm -6:45pm Dowd Room, University Center

Friday, February 21 Deadline for Orientation Counselor Applications

Saturday, February 22 Orientation Counselor Interviews

Monday, March 3

Applicants will be required to participate in a 2 ½ hour group interview. There will be 6 2 ½ hour time blocks for up to 35 OC candidates for each Each applicant must sign up for one of these time slots to be considered. You must be available for the entire time block. YOU MUST SIGNUP FOR A INTERVIEW BY by February 23. Details about signup will be forthcoming.

Week of April 1 Applicants will be notified

Mandatory Training 11:00am - 3:00pm University Center Saturday, April 26

Weekend of August 8 Mandatory Ol. Training

Monday, August 11 -Mandatory Orientation Staff Training - Orientation 2014 Sunday, August 24

(Maybe start Tuesday)

Some good, some bad in NFL coach shuffling

COACHING, from A10

incomprehensible decision making, and his development will be a key to the team's future success. Schwartz deserved to be fired, as the Lions consistently underperformed on his watch.

The problem with this hire is Caldwell's inconsistency. He helped develop Manning, but Manning was going to be good regardless of who coached him. In his year with the Indianapolis Colts without Manning, the team tanked for Colts quarterback Andrew Luck, so it is hard to evaluate Caldwell's coaching abilities.

Caldwell's work with Flacco has been less inspiring. Flacco quietly played a mediocre regular season before the unmitigated disaster he was this year, throwing interceptions at a stunning clip. Flacco's playoff success notwithstanding, Caldwell just hasn't shown that he can change turnover-prone Stafford's habits soon enough before Calvin Johnson is past his prime.

Cleveland Browns

Out: Rob Chudzinski (4-12) In: No one (yet)

Rob Chudzinski lasted only a season with the Browns, and despite a 1-10 finish to the season, his firing took most people by surprise. Chudzinski helped develop a good offensive line and an aboveaverage defense, including huge leaps from cornerback Joe Haden, tight end Jordan Cameron, and wide receiver Josh Gordon. Poor quarterback play doomed the Browns, but Chudzinski was working with one of the worst quarterback situations in recent memory.

Buffalo Bills defensive coordinator Mike Pettine has emerged as a candidate for the vacancy, but the lack of rumors suggests that the Browns





Courtesy of Amy Meredith via Flickr The Cleveland Browns (above) and the Minnesota Vikings (bottom) have both seen changes this season.

are waiting on one of the Se-

attle Seahawks' highly touted coordinators, Darrell Bevell or Dan Quinn.

Washington Redskins

Out: Mike Shanahan (24-40) In: Jay Gruden (Cincinatti Bengals offensive coordinator)

What Mike Shanahan did with franchise quarterback Robert Griffin III (RGIII) is ridiculous and he deserved to lose his job for turning the situation into a media circus. Gruden's hire is a toss-up.

Gruden has done an excellent job with the Bengals' offense in the past three years. Say what you want about quarterback Andy Dalton, but he has far exceeded the low expectations laid out for him. The receiving corps — particularly wide receiver AJ Green – the offensive line, and the running game were all impressive units that exhibited positive development over the years and prove that Gruden clearly has the ability to help surround RGIII.

However, the Washington offense was relatively successful despite RGIII's apparent hindrance from knee surgery. The big problem was a disastrous defense. Gruden is an offensive coach. Of course, personnel would fix the defense more than a coaching hire, but someone who could develop the team's defensive talent would be more beneficial than an offensive mind.

Tampa Bay Buccaneers

Out: Greg Schiano (11–21) In: Lovie Smith (former Chicago Bears head coach)

While players seemed to take the locker room from previous coach Raheem Morris, hiring a disciplinarian was Tampa's solution to a team

perceived as lazy and sloppy. Schiano's hiring was such a success that franchise quarterback Josh Freeman bolted after a public feud with him, and a visibly disinterested team began the season 0–8.

Smith is a talented head coach and is not a disciplinarian, or a tough-love coach, or any of the other platitudes used to describe fools like Schiano. Smith took the Bears to the Super Bowl in 2006 and found success with his Tampa 2 defense, which would fit the Buccaneers' defense perfectly. Mike Glennon may not be the answer at quarterback, and there are holes elsewhere on the team, but these are problems for Smith to address, and he will answer them.

Minnesota Vikings

Out: Leslie Frazier (21-32) In: Mike Zimmer (Cincinnati Bengals defensive coordinator)

This hire was an excellent decision for a team that hadly struggled defensively last season. Frazier did not deserve to be fired, as the holes in the defense were as personnel-based as they were scheme-based. Zimmer has compiled an extremely impressive résumé since his NFL origins in 1994. The pile of late-round draft picks and overlooked players starring on the Bengals' defense became a fearsome unit under Zimmer, despite rashes of injuries, and showed Zimmer's impressive talent for scouting and developing players. This unit will help a Vikings defense that couldn't stop anyone last season; the offense isn't the problem.

The team needs to address its quarterback carousel, but running back Adrian Peterson can carry a mediocre passing attack. This team is not far removed from a surprise playoff run, so expect improvement in the near future with an excellent new head coach.

A-Rod's steroid mistake

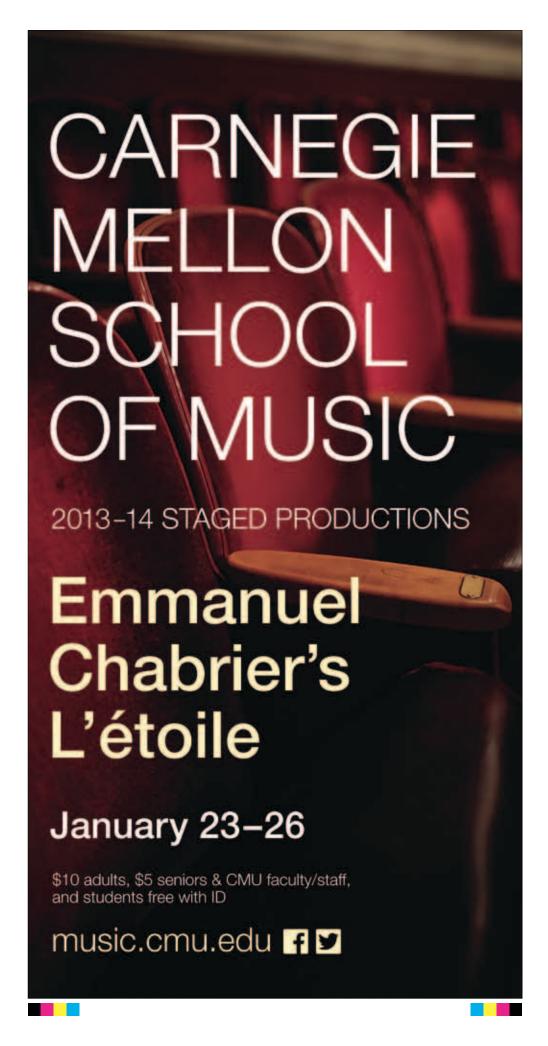
RODRIGUEZ, from A10

unwillingness to cooperate with the investigation, Major League Baseball brought down the hammer on A-Rod, leveraging a recordsetting 211-game ban.

Rodriguez refused to back down from the fight. He appealed his case and tried to fight it in the court of public appeal. But the same public that had been so willing to accept his apology and admission nearly five years ago was turning quickly. A-Rod had gone from being a baseball wonder to an overpriced player who couldn't hit in the clutch.

Suddenly, the dreams of A-Rod redefining baseball in the post-steroid era transformed into him becoming the poster child for modern PED usage. Rodriguez may have won his appeal, although all it really accomplished was to allow A-Rod to play out the end of this season.

Rodriguez had chance to make a deal and flip on the Biogenesis clinic in exchange for a standard 50-game suspension, but the savior complex — his desire to become the best - drove him to hubris. The man who had a shot to break the 800-home-run mark has lost everything. Given the way Hall of Fame voters have been treating formerly surefire Hall of Famers who were associated with steroids, there is a legitimate chance that A-Rod — the once-in-alifetime talent who seemed invincible — won't even be let into Cooperstown.





Sports

Basketball teams start semester with winning records

ZEKE ROSENBERG Junior Staffwriter

LAURA SCHERB

Operations Manager

After a promising 4-0 season start, an up-and-down run has left the Carnegie Mellon men's basketball team at 8-5 halfway through the season. Senior guard Christian Manoli has led the charge, averaging close to 18 points and 7 rebounds per game, including a career-high 32 points against Emory University on Friday in the team's first conference victory. That game and a heartbreaker to Case Western Reserve University — a game in which CMU led by nine points with under four minutes remaining — leave Carnegie Mellon 1–1 in conference play.

Friday's game against Emory showed the Tartans' ability to make adjustments. The first half was a back-andforth struggle with eight lead changes in the first nine minutes. An Emory run put the Eagles up 33–24, but after that it was all Carnegie Mellon. Down by a point going into halftime, the Tartans scored eight of the first 10 points in the second half. Later, senior guard Asad Meghani scored seven consecutive points, and Carnegie Mellon was in the driver's seat, taking the final lead after Manoli converted an and-one to put Carnegie Mellon up 75–73 with four minutes left.

Manoli's consistent shooting (7–13) and impressive showing at the free throw line (18–21) took Carnegie Mellon to a 95-83 win, sealing the Tartans' first conference win of the season.

The men's team pulled out a 76–60 victory against the University of Rochester in an away game on Sunday, gain-



The men's basketball team practices for its Friday and Sunday games in Skibo Gymnasium on Thursday morning.

ing ground in the second half the team was first-year guard after facing a 13-point setback prior to halftime. Rochester didn't give up easily when the Tartans made a return. The teams played neck and neck for the remainder of the game; with barely over a minute left, the Tartans went 6-for-7 from the foul line to pull the win. Christian Manoli.

Overall, the Tartans shot an impressive 50 percent throughout the game. Leading

0

0

0-0

and forward Jack Serbin, whose 24 points set a personal record. Also integral to the victory were junior forward and center Matt Loebbaka and senior forward Rob Mohen, senior guard Asad Meghani, and senior guard and forward

Loebbaka was named a member of the Division III NCAA Student Council. He is

only the third member from and corralling nine rebounds the UAA to receive the honor.

Carnegie Mellon women's basketball is also having a strong season. Despite a recent 0-2 stumble in conference play, including an overtime heartbreaker to Emory, the team stands overall at 9-4 midway through the season. First-year center and forward Lisa Murphy has been outstanding, scoring 20 points

per game to this point and nabbing two UAA women's basketball Athlete of the Week awards. The women's team is undefeated on its home floor - a trend the women are hoping to take into the spring, as their remaining 12 games are all conference clashes.

Jonathan Leung/Photo Editor

The women found less success than the men Friday night as they were outlasted

by the ninth-ranked Emory in overtime. With Emory coming into the contest undefeated, Carnegie Mellon never backed down and traded blows with Emory the entire contest. Both teams traded runs and leads and, by the end of regulation, there was nothing to separate the two squads.

With a tie at the end of regulation, Emory had a chance to win the game with two free throws. However, both free throws missed. At the end of a back-and-forth overtime, with the score tied 68-68, junior guard Gabrielle West missed a potential game winner. On the ensuing rebound, a foul caused Emory to get a second chance to win the game with free throws and less than a second remaining on the clock. This time, both free throws sank, and Carnegie Mellon's strong effort had to go down as a loss.

Murphy rose to the occasion, scoring 36 points and collecting 14 rebounds in an outstanding individual performance, despite the loss.

The women's team also won Sunday against Rochester, but in a much closer contest.

Beating Rochester 71–70 with a jumper shot by sophomore forward Liza Otto in the last 30 seconds of the game, the Tartans fought a tight battle the entire time. The teams stayed neck and neck, trading points and the ball almost equally until the last half-minute. Overall, the women shot a respectable 43 percent from the floor.

The team was led by Otto, Murphy, and senior guard Jacquie Shaw.

This week, the Tartans will host the University of Chicago Maroons on Friday. The women's team plays at 6 p.m. and the men's team plays at 8 p.m.

UAA Sports Standings

Men's Tennis

Women's Tennis

Men's Basketball

3 0 Wash. U. 3-0 12 2 Rochester 0-0 2-1 10 4 CMU 0-0 4 Emory 9 5 Brandeis 0 - 00 0 CMU Chicago 9 5 Chicago 0 - 00 0 11 3 **CWRU** 0-0 0 NYU **CWRU** 9 5 0 - 00 0 **Emory** 0 0 Rochester 1-2 7 7 NYU 0 - 00-3 8 6 Wash. U 0

Women's Basketball

Brandeis

Univ.	Conf.	W	L	Univ.	Conf.	W	L
Emory	3–0	14	0	CMU	0–0	2	0
NYU	2-0	13	0	Rochester	0–0	1	0
Wash. U.	2-0	12	1	Brandeis	0–0	0	1
Rochester	1-1	7	6	Chicago	0–0	0	0
CWRU	1–2	7	7	CWRU	0–0	0	0
CMU	0–2	9	4	Emory	0–0	0	0
Brandeis	0–2	6	7	NYU	0–0	0	0
Chicago	0.2	6	7	Wach II	\cap \cap	\cap	Λ

SPORTS COMMENTARY

A-Rod loses it all on second scandal

CARL GLAZER

Senior Staffwriter

New York Yankees third baseman Alex Rodriguez (A-Rod) was supposed to be the one. As a phenomenal shortstop with the Seattle Mariners, he had it all: power, average, speed, and defense. Even when playing with former professional Ken Griffey Jr., A-Rod was above and beyond. Griffev's career was sidelined by injuries, but A-Rod was above it all.

Rodriguez signed the most expensive contract in baseball history — twice. He won three MVP awards, including one with the last-place Texas Rangers. A-Rod was the youngest member of the 500 and 600 home run club. He was going to break every record and become the new face of baseball, putting the

Barry Bonds and his contemporaries.

The first confirmation that Rodriguez wasn't the choir boy he was made out to be came in February 2009, when A-Rod publicly admitted to steroid usage for the first time. Before this, Rodriguez had publicly denied all use of performance-enhancing drugs (PEDs), including in an interview with Katie Couric on 60 Minutes. For the 2009 confession, A-Rod admitted to using PEDs during his time with the Rangers from 2001 to 2003, claiming that he was under "an enormous amount of pressure" to live up to the expectations of his record contract.

It seemed that A-Rod's PEDs usage was all behind him. After watching steroidtainted retired slugger Rafael

sport past the steroid scandal Palmeiro wag his finger at ball players, including A-Rod. that marred the record-setting Congress, swearing up and Twelve of the players accepted down that he did not take steroids, only to have him fail a drug test the following season, it was refreshing to see an athlete tell the truth.

There were a few rumors, but — just like with former Yankees slugger Jason Giambi after an admission of guilt, most were more than content to put the tainted past behind them. The more recent discussions about A-Rod were about his inability to live up to his new record-setting contract. A rash of injuries and terrible postseason play led to a chorus of angry boos led by the ruthless New York Press.

But everything changed with the introduction of the Biogenesis scandal. The Tony Bosch-owned clinic was accused of dispensing PEDs to several Major League Base-

their suspensions with no appeal, hoping to quickly and quietly move on from the scandal. Milwaukee Brewers right fielder Ryan Braun was the only other player with previous and unrelated steroid accusations. He tested positive for PEDs following his 2011 MVP season, but got the positive test thrown out due to a technicality with the sample collection protocol. He quickly reached a deal with the commissioner and, in exchange, admitted fault for the previous test and accepted a suspension for the remainder of the season.

This left only A-Rod as the face of the Biogenesis scandal. Given A-Rod's previous transgressions and his

See RODRIGUEZ, A9

Upcoming Schedule

Men's Basketball

Friday University of Chicago at Carnegie Mellon, 8 p.m.

Sunday Washington University in St. Louis at Carnegie Mellon,

Friday, Jan. 31 New York University at Carnegie Mellon, 8 p.m.

Women's Basketball

Friday University of Chicago at Carnegie Mellon, 6 p.m.

Sunday Washington University in St. Louis at Carnegie Mellon, 2

Friday, Jan. 31 New York University at Carnegie Mellon, 6 p.m.

Men's Swimming and Diving

Saturday Denison University at Carnegie Mellon, 1 p.m.

Saturday, Feb. 1 Carnegie Mellon at University of Pittsburgh, 11 a.m.

Women's Swimming and Diving

Saturday Denison University at Carnegie Mellon, 1 p.m.

Saturday, Feb. 1 Carnegie Mellon at University of Pittsburgh, 11 a.m.

Men's Tennis

Friday, Jan. 31 Robert Morris University at Carnegie Mellon, 6 p.m.

SPORTS COMMENTARY

A guide to the NFL coaching carousel

ZEKE ROSENBERG Junior Staffwriter

With the end of the NFL's regular season, many teams are now vying for a spot in Super Bowl XLVIII. For those teams not lucky enough to make it past the regular season, many coaching changes are underway. The following details a short guide to the head coaching changes around the NFL:

Tennessee Titans

Out: Mike Munchak (22-26) In: Ken Whisenhunt (San Diego Chargers offensive coordinator)

This firing was not a surprise after three middling seasons from Munchak, a 30-year veteran of the Titans' organization. Big steps forward from cornerback Alterraun Verner, defensive tackle Jurrell Casey, and the rest of the defense were overshadowed by poor play from former feature running back Chris Johnson and injuries to franchise quarterback Jake Locker. Locker was clearly on the rise before injuries derailed his — and the Titans' — season.

This team has a young core with a potentially talented quarterback who needs help getting the offense together. Whisenhunt's resurrection of Chargers quarterback Philip Rivers might appear to make him a good fit, but the situation is not similar. Rivers was on a good team with a good coach for the first time in five years, and he was not a project

like Locker. Whisenhunt had two suc-

cessful years as a head coach for the Arizona Cardinals, but when former quarterback Kurt Warner retired, he never found success again. Furthermore, Whisenhunt's post-Warner quarterback carousel stunted the development of many strong-armed, athletic quarterbacks with accuracy problems. This assessment contrasts with more accurate, pocket passers like Warner and Rivers. Jake Locker, however, fits the former description, and a quarterback carousel between Locker and backup Ryan Fitzpatrick would do more to stunt Locker's development than any injury could.

Whisenhunt's hiring sim-

ply boggles the mind. It emphasizes his worst qualities.

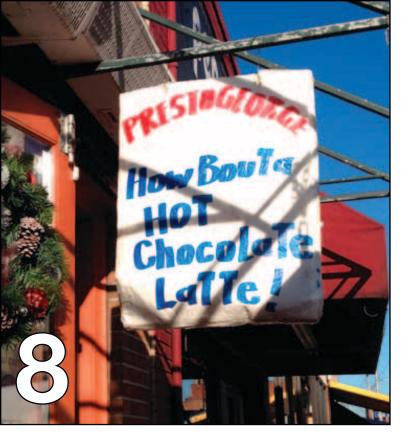
Detroit Lions

Out: Jim Schwartz (29-51) In: Jim Caldwell (Baltimore Ravens offensive coordinator)

Denver Broncos quarterback Peyton Manning and Ravens quarterback Joe Flacco might disagree with me, but I do not think this decision was a good one for the Lions. This team is incredibly talented, and wide receiver Calvin Johnson and the entire defensive line are the best at their jobs in the NFL. Detroit quarterback Matthew Stafford has shown both flashes of brilliance and completely

See COACHING, A9

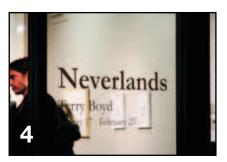




...this week only

3 Posner Center An exhibit, called "Make Your Own Meaning: Evolving Ritual" opens in the Posner Center. Neverlands 4 A CMU alumnus opens an art exhibit in 709 Penn Gallery that is inspired by Peter Pan. 5 **PSO** The Pittsburgh Symphony Orchestra wows with Haydn, Strauss, and Danielpour. 6 **HBO** The ever popular network reboots a new seasons of Girls and debuts True Detective. 8 Strip District Here are the highlights from Pittsburgh's tastiest, quirkiest neighborhood. 10 Sherlock The BBC show returns for another breathtaking season.









regulars...

3	Advice Everything you need to know about bribing TAs and dirty roommates.
5	Paperhouse Paperhouse talks about great albums that didn't get enough attention in 2013.
7	Dollar Movie AB Films presents Captain Phillips and Ender's

Game.

	diversions
11	Comics Start week two off with a laugh.
13	Puzzles Challenge yourself!
14	Horoscopes See what the new semester will hold for you.

See what the new semester will hold for you.

See what the new semester will hold for you.

Calendar

Things to do for fun around campus and the community.

Posner exhibit explores rituals

Displays showcase changes over time and across cultures

Rituals form the basis of human social activity. While rituals may seem like things of the past, in truth, many have simply evolved over time in changing contexts. Moreover, rituals are not just significant cultural habits; they are also inherently personal decisions. In many ways, rituals form the basis for self-created practices to deal with personal issues.

Junior BHA student Nicole Anderson has always been interested in rituals of many types. She explored the concept of the evolution and origins of personal rituals and rites in a curated exhibit of books and artifacts from the Posner collection called "Make Your Own Meaning: Evolving Ritual" in the Posner Center that opened this past Friday.

The driving force behind Anderson's exhibit deals with the question of how a ritual can enable the individual to cope with change, focusing on large, life-changing moments that society deems imporant. The exhibition is composed of six displays organized into three stages of life: adolescence, marriage, and death. Within each stage of life, Anderson explores the traditional ritual in one display and an adaptation to the original in the next, creating an interesting interplay between the past and the present.

For marriage and death, Anderson compares traditional rituals with modern adaptations. She juxtaposes the rituals that make up a traditional Anglo-Saxon wedding with recent Indian-American weddings that combine traditional Indian weddings with their American counterparts. Likewise, the exhibit compares ancient Chinese death rites to the modern customs of Chinese Americans, showing what has stayed the same and what has evolved. The exhibit comments on the way in which individuals take ownership of outdated rituals in order to use them more meaningfully within the context of their own lives.

Anderson took a slightly different approach to the two sections devoted to adolescence. These displays focus less on the manner in which social groups change their ethnic customs due to migration, and more on how being a teenager in the United States has changed. "Prom" tells the story of tradition and how the "most important day of your life" evolved. The exhibit cites movies and TV shows that glorify simple events as well as critique them, from the ageold, yet constantly retold Cinderella fairy tale to 10 Things I Hate about You. An exhibit on the concept of the teenage bedroom explores the increased importance of the idea of creating spaces that reflect personal identity, drawing from Shakespeare's Ophelia and the 1999 film The Virgin Suicides.



Jonathan Carreon | Staff Photographer
Junior BHA student Nicole Anderson's exhibit uses
historical and contemporary examples of
rituals in our daily lives.

Through the use of both historical and contemporary examples, Anderson is able to give the viewer an appreciation for the rituals that define both individuals and cultures. The exhibit examines the way in which rituals are able to evolve, while preserving some sort of cultural integrity.

In the 21st century, the concept of identity has become increasingly personal; people create their own image and do what they are personally passionate about. The years of living lives based on the past seem distant and foreign, yet in truth, people are inherently bound to the past. Rituals become the glue that both links people to their heritageand inhibits them from recreating their identities.

Anderson's exhibit offers an interesting perspective that is critical at times and celebratory at others. The range of rituals that are studied within the displays ensures that the exhibit resonates with a wide variety of patrons from all walks of life.

Sarah Moss-Horwitz | Staffwriter

Advice for awkward people

About manipulating your TA and splitting chores

Dear Ryan and Matt,

This semester is off to a pretty good start, but one thing is getting to me: My roommate has a new boyfriend, and I'm happy for her, but he is my TA. I see them together each night on the couch cuddling, and watching marathons of Breaking Bad. They are super cute, but this class is going to be a killer for me this semester. What do I do? How do I keep these two lives separate?

Sincerely, Likes Everyone Verily, Extremely Reticent About Grade Eligibility

Dear LEVERAGE,

We understand that you are obliged to be happy for your roommate and her relationship, but the sad fact of the matter is you should take advantage of the extra time that you have with the TA over everyone else in the class. Milk it for all it is worth. Try to squeeze in some review time when he shows up early and your roommate is still putting on her makeup. Don't apologize for having "lost the remote" until your homework is done for the week. You might even borrow your roommate's phone to bribe some extra credit out of him.

You may end up ruining the relationship, but honestly, which is more important: your friendship with your roommate, or that everelusive A?

Take the grade, Matt and Ryan Dear Matt and Ryan,

My roommate and I get along really well, but there is one thing that has been getting on my nerves: He only does chores around the apartment when he thinks he'll bring a girl home. I'm all for him meeting new girls, but he goes on so few dates that I'm the one who fears my girlfriend will think I'm living with Howard Hughes.

Any Advice?
Clever, Looking Earnestly
About New Uncluttering
Practices

Dear CLEANUP,

Simple fix: set up some online dating profiles with his picture and information, and chat up some cute women. When somone suggests you two meet, you space them out through the week (or month) and tell him when he has a date that he needs to clean up for.

Sure, they will probably realize that the guy they are on a date with isn't as suave as the one who was chatting with them, but at least it gets him to wash the dishes. You get to enjoy a clean, empty apartment with your girl, he meets new people, and everybody wins. I can't see anything that would go wrong with this, except maybe if your girlfriend finds out you have become a regular on a bunch of dating websites. That might not go so well.

Use private browsing, Ryan and Matt

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

Neverlands channels pain and Peter Pan

709 Penn Gallery collection features work of Carnegie Mellon alumnus Terry Boyd

"I want people to get lost in the lines and use their imagination when they look at my work," local artist and Carnegie Mellon alumnus Terry Boyd (CFA '09, MAM '13) said of his latest collection *Neverlands*. Boyd completed his undergraduate degree at the College of Fine Arts at Carnegie Mellon in 2009, and followed up with a Master's of Arts Management from the Heinz College in 2013.

The Pittsburgh Cultural Trust describes *Neverlands*—currently on display at the 709 Penn Gallery until Feb. 23— as "an idiosyncratic and muted interpretation of life and death, originally depicted by the skies, seas, grounds, and characters described in J. M. Barrie's stories. A question of one's own permanence and place in a single line."

Each piece in the display is made up of a series of finely drawn lines with no distinct pattern. Boyd said he loosely based the pieces on clouds and seascapes, but appreciation of the work relies on the human tendency to find patterns. He described the experience as akin to looking at clouds and finding shapes in them.

Neverlands marks Boyd's return to art after a three-year break. The artist said he stopped making art after his father passed away. He said the hiatus was his way of escaping the realization that his father was gone, much like Peter Pan avoided the reality of aging and maturing. After doing some research into Peter Pan Syndrome, a tendency to resist growing up, Boyd felt a connection with the J.M. Barrie character. "Peter Pan was so simpleminded. He had no sense of reality," Boyd said. "Any time something serious happened, he played a game instead of facing it."

Boyd used the character to encapsulate a dark sense of avoidance in his work. The artist channeled grief from his father's death to create the pieces in the display. However, after the three-year recess, he struggled with finding a place to start. "I kind of got lost a little bit, so I did the simplest thing possible — I filled the page from



Courtesy of Ryan Dora

Neverlands, which will figure prominently in this week's Gallery Crawl, will be on display at the 709 Penn Gallery until Feb. 23.



Courtesy of Ryan Doran

The art of *Neverlands* is inspired by Terry Boyd's fear of facing his own mortality following his father's death. While channeling his grief, he felt a connection to Peter Pan's avoidance of serious issues, such as growing up.

left to right. I was thinking of my father with every line, and quantifying my grief with every line stroke," said Boyd. He explained that the empty spaces in the first three pieces ("and the echoes seemed to cry savagely," "there is no path through water to the happy hunting ground," and "the 2 minutes before you go to sleep") are meant to resemble coffins. Boyd said the experience of creating each piece was meditative. "I was organizing myself and teaching myself patience," he said.

meaning and healing process for Boyd, he encourages viewers to approach the work with open minds. "Neverlands is more about getting lost in the lines — not about Peter. It should be abstract with no right or wrong interpretation," he said. "I want people to say, 'I can look at this for 15 minutes every day because I see something new every time.' I was also creating landscapes that help viewers revisit the innocence of childhood."

While the pieces in the display represent a very specific

Boyd channeled his previous training and experience in art throughout the making of each piece. His experience as a fiber artist working with controlled sewing lines shows in these pieces; some viewers mentioned to Boyd that, from afar, they thought the pieces were made using thread. Boyd said that was originally his intention, and he first attempted the pieces using thread, but it was too thick to work with. Instead, he used a very fine-tipped pen for each piece and mimicked a sewing machine, starting at the top left-hand corner and moving from left to right down the page.

"Everything is sort of a very large ripple of the first line," Boyd said. "Where the first line ends is the beginning of the next section." Just as Boyd used these pieces to revisit the innocence of childhood, he used the artistic technique of downward strokes and hatch lines that he learned at a young age and has been using all his life. Each piece is made up of many of these very fine lines. Boyd said, "I can only handle working on these for about two to three hours at a time."

Speaking of his time at Carnegie Mellon, Boyd said, "My heart has always been in the work. CMU has made me the person I am today."

Neverlands is one of several displays and performances that will be featured in the Gallery Crawl in the Cultural District this Friday from 5:30–9 p.m. Admittance to the 709 Penn Gallery is free to the public.

For more information on the event or on the *Neverlands* display, visit *www.trustarts.culturaldistrict.org*.

Jenna Bodnar | Staffwriter

PSO performs moving pieces

Selections from various composers made a great evening

On Friday, Saturday, and Sunday, the Pittsburgh Symphony Orchestra (PSO) performed pieces by Austrian composer Franz Joseph Haydn, German composer Richard Strauss, and American composer Richard Danielpour.

The pieces were all conducted by Polish conductor Christoph König. Sprightly and energetic, König displays palpable enthusiasm for the music. König last conducted the PSO in 2011 and is currently the principal conductor of the Orquestra Sinfónica do Porto based in Porto Alegre, Brazil.

During Friday and Sunday's performances, the PSO featured Danielpour's 2011 piece *Darkness in the Ancient Valley* for Soprano and Orchestra, written for and sung by soprano star Hila Plitmann. She has released many recordings to critical acclaim, including a contribution to Hans Zimmer's soundtrack for *The Da Vinci Code*, for which Plitmann won a Grammy.

The night started off with Haydn, one of the most prolific composers of the 18th century, known as the "Father of the Symphony." Haydn's Symphony No. 22 in E-flat Major, also known as *The Philosopher*, shines as a superb example of his work. The first movement features a steady rhythm provided by cellos and harpsichord. This procedural ticking evokes the image of a philosopher deep in thought. The piece then gallops into its exuberant second movement, stopping to take a breath at the third movement before leaping toward its fast-paced finale.

Darkness in the Ancient Valley stands in contrast to the mannered and orderly style of Haydn's piece. The piece, which is dark, violent, and haunting, is inspired by the brutality of the current Iranian regime, especially with regard to its treatment of women. Danielpour is of Iranian descent, and the music draws influences from Persian folk melodies, Sufi rhymes, and Danielpour's own memory of the Persian records his mother played when he was little.

Danielpour writes in the program, "It's not an accurate, note-perfect representation of the music I heard, but I think it's more interesting because it's more personal. While this is clearly the music of a 21st-century American composer, it is the music of an American composer with a Middle Eastern memory."

The piece is as vast and turbulent as the history of Iran itself. *Darkness* has five movements. The first, "Lamentation," sets the stage with Middle-Eastern melodies drifting about in the air. The next movement, "Desecration," hits like a hurricane. The music blares like an alarm clock, and at times the strings even screech a Hitchcock-esque cry. "Benediction" then presents a fragile peace before "Profanation" lays it to waste.

Plitmann slowly stepped on stage in a glittering silver dress during the last movement, "Consecration," and delivered a beautiful performance evocative of pain and suffering. Her song, with lyrics such as "You may willfully cast me into fire/ but I am an ingot glowing for you" is taken from the translation of a Persian poem written by the mystic Rumi about a woman who chooses not to retaliate against her cruel lover. Although the part was written for her, it is still a wonder how her voice delivers such high and complex notes.

The show on Saturday, instead of *Darkness*, featured a special demonstration and discussion, "Behind the Notes." In this segment, the conductor took the audience through the story and structure behind a piece of music. "Behind the Notes" would be very interesting for people who want to gain greater insights into the minds of composers when they create musical masterpieces.

After an intermission, it was Zarathustra's time to shine. As one of Strauss's most famous pieces, *Also Sprach Zarathustra* was inspired by, and shares its name with, Nietzsche's novel. Both works address man's existence and the trials he faces. Most know *Also Sprach Zarathustra* from its use in the opening of Stanley Kubrick's film *2001: A Space Odyssey*. From those famous first chords to those last muted notes, the PSO's rendition of the piece was intense and inspirational.

The selection of the music added greatly to the performances. There was a sense of progression through the entirety of the show. Though the three pieces were written centuries apart, they nonetheless referenced one another with common themes and motifs. The music, energy, and emotional depth combined to create nearly two hours of magic that the PSO pulled off with ease.

Xiyu Wang | Staffwriter



2013 was an awesome year for music, but also for hype machines. From massive, multimonth long media-engulfing campaigns like Daft Punk's *Random Access Memories* to the surprise release of Beyoncé's self-titled album, it seemed as if every major release last year could be remembered as much for the media campaign as the actual music. In the middle of the constant competition between artists' media campaigns, it was easy for fantastic albums to fall through the cracks. Here are three great albums from 2013 that came out with little-to-no fanfare.

Big Deal - June Gloom

On its second album, Big Deal maintains the core values of the emotionally destructive dream pop of its debut Lights Out without turning into a parody of itself. The group has added a drummer and some tempo variety, for June Gloom. While songs like "In Your Car" and "Teradactol" strongly evoke the aggressiveness of '90s alt rock, it's never hard to remember the tenderness that Big Deal is so adept at evoking. At their best, Big Deal strikes the same emotional chord as Broken Social Scene's most intimate material.

Recondite - Hinterland

Hinterland is the Berlin-based Recondite's second full-length release and is perfect winter techno. Recondite incorporates field recordings from lower Bavaria with conventional-but-compelling song structures to create techno that is emotionally evocative and mechanistic. Album highlights "Clouded" and "Abscondence" are perfect tracks for driving through a barren icy landscape.

Nils Frahm - Spaces

Spaces is a collection of live recordings by pianist Nils Frahm, spanning from 2011–13. This album is worth checking out whether you're a longtime fan or completely new to Frahm's material. Tracks span from the intimate piano solos "Want Missing" and "Over There, It's Raining" to the mesmerizing ambient looping of "Says." The album's centerpiece, "For – Peter – Toilet Brushes – More," expands one of the pianist's most well-known tracks into a suite that embodies Frahm's musicianship: frenzied piano playing, ambient dabbling, and a piercing emotional directness. Space is the type of live album all musicians should aspire to create.

Matt Mastricova | Staffwriter

HBO starts the new year strong with two shows

Girls returns for a third season and new crime drama True Detective debuts with a bang

The new year is upon us and for many people, this month marks the start of new diets, different routines, and an overarching feeling of change. For HBO, 2014 means just one thing: a new year in television.

Sunday, Jan. 12 was a big night for the network, which launched the freshman series *True Detective and* premiered the third season of *Girls*. Viewer numbers were up for both premieres, with *True Detective* securing a whopping 2.3 million viewers and *Girls* receiving a high of 1.1 million viewers. *True Detective*'s impessive numbers make it HBO's biggest premiere since *Boardwalk Empire*'s debut in 2010.

True Detective

True Detective is a thrilling new crime drama told as an anthology. The cast features a brilliant panel of actors including Matthew McConaughey, Woody Harrelson, Michelle Monaghan, and Kevin Dunn, to name a few. The show was created and written by Nic Pizzolatto and directed by Cary Fukunaga. This season tells the story of two Louisiana detectives as they hunt down a sadistic serial killer.

The first episode is only the beginning of what is sure to be a gem of television. The show features outstanding acting by McConaughey and Harrelson. McConaughey shines as eccentric but brilliant cop Rust Cohle, and Harrelson plays his by-the-book partner Martin Hart.

The episode moves quickly as the action shifts between 1995 and 2012. The two characters recount the past as viewers see the action played out by their younger selves. The actors' visual transformations are incredbile as scenes shift from past to present. The sight of McConaughey in his first scene as young Rust Cohle is especially impressive. Details such as these contribute to a cohesion that makes the episode run like clockwork.



Photo courtesy of Wikimedia Commons

Girls creator Lena Dunham stars as Hannah Horvath, a recent college grad trying to navigate the many pitfalls of growing up after you've grown up

The setting is equally engaging, creating an unmistakable sense of place for the action to unfold. Sweeping views of Louisiana landscape, intriguing southern dialects, and small-town politics aid in establishing the incredibly appealing setting.

Unlike the endless vortex of crime shows that flood the majority of today's television networks, *True Detective* offers something unique. As expected from HBO, the

writing is flawless, character development substantial, and action engaging.

Pizzolatto and Fukunaga clearly share the same artistic vision. It is their unparalleled collaboration that endows this new series with cinematic scope.

True Detective airs at 9 p.m. on Sundays on HBO.

Girls

HBO is no stranger to comedy, having won countless awards for its sitcoms. Jan. 12 was a big night for fans of *Girls*, with HBO featuring the back-to-back release of two new episodes.

The quirky series is written, produced, and directed by the brilliant Lena Dunham, who is also the star of the show. The story centers around the lives of four friends as they struggle to find their place in this seemingly impossible world of ours. Heralded as a *Sex and the City* for the new generation, *Girls* features dry and somewhat dark humor, raw sex scenes, and comedic accounts of the life struggles familiar to post-graduates.

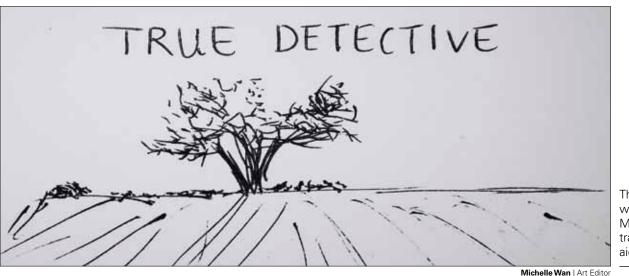
The first episode focuses on the romance between Hannah (Lena Dunham) and Adam (Adam Driver). The connection between these two characters feels more substantial this season compared to past ones. Their raw, surprisingly realistic relationship sheds some light on the familiar dark comedy of the series. This episode also features the return of Jessa (Jemima Kirke) and her struggles in rehab. The episode clips along at a satisfying pace for a great launch into the third season.

The second episode is centered on Hannah's journey to bring Jessa home from rehab. The episode is largely focused on Hannah, Adam, and Shoshana (Zosia Mamet) and their somewhat dysfunctional road trip. This episode moves a bit more slowly than the first, but still includes much of *Girls*' signature comedy.

Girls airs at 10 p.m. on Sundays on HBO.

Zachary A. Mendez | Staffwriter

The new anthology crime series *True Detective* — which airs Sunday nights at 9 p.m. — stars Matthew McConaughey and Woody Harrelson as cops trying to track down a serial killer in Louisiana in 1995 as well as aiding a similar investigation in 2012.





Experience the symphonic power of three classical icons.

Bach, Beethoven, & Brahms January 31 & February 2, Heinz Hall

Three icons. Hundreds of years of musical influence. Bach's Toccata and Fugue in D Minor inspired a generation of children in Disney's Fantasia. Bach also inspired the next generation of symphonic masters: Beethoven and Brahms. Collectively their work is a dramatic and vivid portrayal of nature in tumult. Don't miss the chance to experience their symphonic power this season.



A guide for getting lost in the many flavors of the Strip District

This Pittsburgh food destination offers a near-endless variety of cuisines and stores sure to satisfy any tongue's cravings

by **Laura Scherb** | Operations Manager

What looks like an ordinary stretch of street on Penn Avenue lining the Allegheny River hides one of Pittsburgh's most distinctive and entertaining neighborhoods: the Strip District.

Between 11th and 33rd Streets off of Penn Ave., the mile-long Strip offers an interesting collage of cultures and people, as well as ample opportunities to spend all of

A Saturday morning trip to the Strip District will not disappoint. There's something for everyone, from wandering through Yinzer shops that sell every piece of tacky black-and-gold Steelers attire you never knew you needed while blasting songs about the Steel Curtain, to watching the hordes of people that stream down the

The biggest attraction of the Strip, as it is colloquially known, is the food. The variety of cuisines and venues present overwhelming options for every meal. Going



The Pennsylvania Macaroni Company, better known as Penn Mac, is a general Italian grocery store. It sells a wide variety of pastas (including fresh linguini), olive oils, and balsamic vinegars. It also features an extensive cheese selection and a variety of nuts and grains in bulk.



Reyna Foods on Penn Avenue sells a variety of Mexican foods, including freshly-made tortillas and chips.

to the Strip on an empty stomach is an absolute must: the slew of specialty food stores and restaurants are sure to satisfy even the pickiest eaters and the snobbiest foodies. Whether you choose to sit down for a meal or simply grab food to go, you won't leave this neighborhood unsatisfied.

Pennsylvania Macaroni Company

Essentially a grocery store that took a heaping dose of Italian steroids, the Sunseri brothers' Pennsylvania Macaroni Company features anything and everything you could ever desire in your quest for extensive Italian cooking adventures. Massive jars of tomato paste, cannolis stuffed with perfectly fluffy ricotta, more varieties of olive oil than the colors of the rainbow, and huge barrels of beans all set the scene of a bustling market. Besides the freshly homemade pasta — a must for anyone who values a good carbohydrate — the indisputable highlight of "Penn Mac" is the cheese bar. Featuring cheese from everywhere, including France and Holland, the cheese bar is staffed by some of the friendliest faces in Pittsburgh who will help you find exactly what you're looking for. Whether simply for the experience or for ingredients for your next adventure in the realm of Italian cuisine, a visit to the Pennsylvania Macaroni Company is absolutely necessary.

Reyna Foods

Delightfully tacky and unrefined, Reyna Foods is an obligatory stop on your way down Penn Ave. Don't judge the quality of the food by the decorations: brightly colored sombreros that seem to capitalize on every cheap stereotype imaginable, piñatas that dangle above shelves of hot sauce, and kitschy Day of the

Dead figurines that line the cash register. The authentic and high-quality food found here is well worth the experience. The tortillas and tortilla chips are freshly made every day and chances are they'll still be warm when you pick them up. In the back of the store are metal garbage cans filled with hot peppers that will burn your nose and whose smell fills the entire interior. The same peppers from the tins are used in the store's homemade salsas, which are laid out by the register for customers to sample as they wait in the inevitably long check-out lines. If you're not stopping by Reyna Foods for the cringeworthy decorations or to satisfy your need for spicy hot flavors, do it for the disgusting amount of salt sprinkled on those chips.

The Enrico Biscotti Company

Whether you're craving the perfect loaf of rosemary and olive oil focaccia or a deliciously crunchy piece of biscotti to go with your espresso, The Enrico Biscotti Company is the place to go. A full service sit-down restaurant attached to a bakery and store, the space is as small and crammed as it is authentic and bursting with character. At the restaurant, the food is prepared literally right in front of you; the tables are organized beside, and even inside, the kitchen. Waiters and cooks bustle around the tables with an energy that is put to good use — a perk that becomes apparent in the freshly prepared food. The food is hot, generously portioned, and delectable. The selection of baked goods on hand for dessert — either in the restaurant or for take-out is mind-blowing. There is even biscotti for dogs. The perfect place for a not-so-expensive lunch date or a sweet treat to go with your La Prima coffee, The Enrico Biscotti Company is great for any occasion.

Mon Aimee Chocolat

A hot chocolate bar, a host of chocolates from around the world, and possibly the most knowledgeable chocolate connoisseurs on this side of the Atlantic await you inside the chic chocolate boutique on the corner of Penn Ave. and 21st Street. The name of the shop translates to "My Friend Chocolate," and after a quick walk into the store, you'll see why.

After browsing the varieties of chocolate and the plethora of flavors — bacon, hot pepper, even lavender — it's clear that the shop owners have a very intimate relationship with all kinds of cacao. And even if you prefer candy of the non-chocolate variety, the shop will satisfy your sweet tooth. The owners also offer a large selection of vintage and throwback candies like NECCO Wafers and Candy Buttons that will have your mouth watering for the days of your youth. A great place to pick up souvenirs from your visit to the Strip, Mon Aimee Chocolat is sure to be a fast favorite.

Prestogeorge Coffee & Tea

By simply walking into this tiny little boutique, you're committing yourself to buying at least one bag of flavored tea or coffee. The vast array of flavors that are featured in Prestogeorge all mix together to create a tantalizing fragrance. Issuing from the jars of tea leaves and coffee beans and the small coffee bar, the aroma speaks to the level of intensity with which these people regard their morning beverages.

The experts at Prestogeorge know exactly what to recommend, be it green tea. Arabic coffee, or a new brewing pot. Plan a stop to this shop, if only to breathe in the smell of the best teas and coffees around.

Robert Wholey & Co.

Picture a grocery store. Now make it one that primarily sells fish. Now add wall decorations of singing cows that encourage you to drink milk. Throw a toy train track on the ceiling, and you've got Wholey's. Eclectic, quirky, and extremely fishy-smelling, the store is worth a visit just for the experience. The seafood section has lobsters, what seems like 800 varieties of fish, and more shrimp than you know what to do with. Make your visit quick to be nice to your nose, but make sure to stop by, if only to see the singing cow.

The Strip District is uniquely Pittsburgh. The range of ethnicities, flavors, and venues speaks to the eclectic mix that is characteristic of the Steel City. It's the perfect place for a Saturday trip out of the Carnegie Mellon bubble to see the city. Whether you choose to spend your time there browsing through one of the quirky stores or sampling all sorts of amazing food, any time you spend on Penn Ave. in the Strip will be totally worth it.



The Strip District has something to offer everyone, and Mon Aimee Chocolat is a chocoholic's heaven on Earth. Chocolate here is served in every form and flavor imaginable.



Laura Scherb | Operations Manage

Top: The Enrico Biscotti Company sells more than just biscotti. Take home a variety of baked goods or enjoy a meal at its sit-down restaurant

Right: Prestogeorge Coffee & Tea offers flavored teas and coffees from around the globe



Sherlock returns after two-year hiatus

Third series premiere focuses on death-defying fall with nods to show's fandom

Warning: This article contains spoilers for the Sherlock episode "The Empty Hearse."

Faking death for two years may seem crazy, but for self-proclaimed high-functioning sociopath and consulting detective Sherlock Holmes, it was absolutely necessary. At least, that's what he thought. The famous detective came back in a big way yesterday with "The Empty Hearse," the U.S. premiere of Sherlock's third season on PBS's Masterpiece Mystery.

The episode, which is the first of the season's three 90-minute episodes, marked the show's return from a two-year hiatus. The hiatus was a result of the schedules of stars Benedict Cumberbatch, who plays Sherlock, and Martin Freeman, who plays Sherlock's sidekick John Watson, as they filmed roles in major blockbusters such as The Hobbit: The Desolation of Smaug.

Fans were left wondering how Sherlock survived his fall from the roof of St. Bart's Hospital in the final moments of the season two finale. Theories ranged from the practical to the fantastical, and the show's co-creators Mark Gatiss (who also appears in the series as Sherlock's brother Mycroft) and Steven Moffat did not disappoint.

It is not until close to the end of the episode that Sherlock reveals how he really did it, although the truth of his confession is debatable. In the meantime, the episode features multiple scenarios depicting theories of how Sherlock could have survived the fall, including one where arch-villain Jim Moriarty (Andrew Scott) also fakes his death and aids Sherlock in a giggly prank call to John. That scenario ends with the pair of geniuses leaning in for what is presumably a kiss.

The fantasy scenarios proposed by members of Sherlock's fan club in the show mirror the real-life scenarios proposed by fans of the show worldwide. In fact, the entire episode plays out like a love story to the show's fandom — from the theories to the jokes about John's new mustache, to the concise way Sherlock explains his sudden appearance at a restaurant: "Not dead"

Even the guest stars and cast additions seem as if they could come from a fans' dreams: Cumberbatch's actual parents, actor Timothy Carlton and actress Wanda Ventham, make appearances as Sherlock's parents; U.K.-based magician Derren Brown makes an appearance as himself aiding in one of the fantasy scenarios; and Freeman's wife, Amanda Abbington, joins the show as Watson's fiancée, Mary Morstan.

An episode full of so many Easter eggs and nods to the show's fans easily could have turned into 90 minutes of empty dialogue, rather than an intelligent story about Sherlock. Instead, Moffat and Gatiss crafted an episode that is funny, heartfelt, and even suspenseful at times.

The co-creators managed to take Sherlock's traditionally static character and give him an emotional depth, shown through Sherlock's changed treatment of Molly Hooper (Louise Brealey), the morgue worker whom he mistreated in previous seasons.

Hooper's larger role in the episode, and presumably in the series, is the most prominent example of minor characters being pushed to the forefront to flesh out the main cast more.

Even the case that Sherlock pursues serves to further the character development. Sherlock returns to London to hunt down a terrorist threatening an attack on the city, and the conclusion of the case leads to a release of emotions and forgiveness that was inevitable given Sherlock's return.

Sherlock's latest episode is one of the best of the series. The 90 minutes seem to fly by, and it's hard to believe that, with the end of the first episode, the season is already a third of the way over.

Filled with love and respect for not only the characters, but the fans as well, "The Empty Hearse" sets a high bar for a new year in television.

Mairéad Pettit | Personnel Manager

Arrow returns with more short story arcs

New episode sets up the rest of the season, but doesn't continue character development

Warning: This article contains spoilers for episode 10 of Arrow's second season.

Arrow returned from its winter hiatus on Wednesday with "Blast Radius," the 10th episode of the second season on The CW. In the episode, protagonist Oliver Oueen (Stephen Amell) pursues the man in the skull mask until he gets distracted by the arrival of Shrapnel (Firefly's Sean Maher), a bomber who has a bone to pick with the government of Starling City.

In the first half of the second season, *Arrow* seemed to be moving away from its trite villain-of-the-week story arcs toward story lines featuring more long-term antagonists. While these recurring villains can be corny—as can only be expected in a television adaptation of a comic book—they tend to be more well-rounded and intriguing than their perfunctory counterparts. Short-term foes tend to be boring and rather forgettable, and Shrapnel unfortunately falls into this same trap. He spouts anti-government vitriol, blows up buildings, and then gets taken down by Oliver with ease.

Another major pitfall of the episode was the forced tension between Oliver and Felicity Smoak (Emily Bett Rickards) regarding her visit to the comatose Barry Allen — The Flash — in Central City. Oliver snapping at Felicity over her visit to a sick friend, no matter their potential romantic involvement, seemed out of character and childish.

Arrow needs to continue to develop Felicity as a character, not as a potential romantic partner for Oliver. She's fantastic and funny, and she never fails to liven up the scenes she's in, but the possibility of a romantic relationship between her and Oliver feels too forced for the narrative of the show's second season. Felicity is a brilliant woman, and more in touch with reality than either Oliver's bodyguard Diggle or Oliver himself. Through her, the show's executive producer Andrew Kreisberg has the ability to explore the incongruity and insanity of Oliver's vigilante quest more deeply. Instead, Felicity seems more of a romantic back-up plan.

Sebastian Blood, the morally-questionable potential mayor of Starling City, was one of the best parts of "Blast

Radius." On the one hand, the character comes across as an earnest civil servant who wants the best for Starling City, but it has already been revealed that he is the man in the skull mask that Oliver is pursuing. This week's episode also revealed that Blood's mother is in a mental institution because he put her there after he killed his abusive father. Blood has the potential to be a truly juicy villain, complete with a desire to protect Starling City and a loose grasp on moral compunctions. Hopefully, Kreisberg will continue to pour energy into fleshing out Blood's storyline and his relationship with both his family and Oliver's old friend Slade Wilson, who was revealed to be a major part of Blood's storyline in the ninth episode of the second season.

All in all, "Blast Radius" didn't knock anybody's socks off this week, but it was a solid episode and a good set-up for the rest of the season.

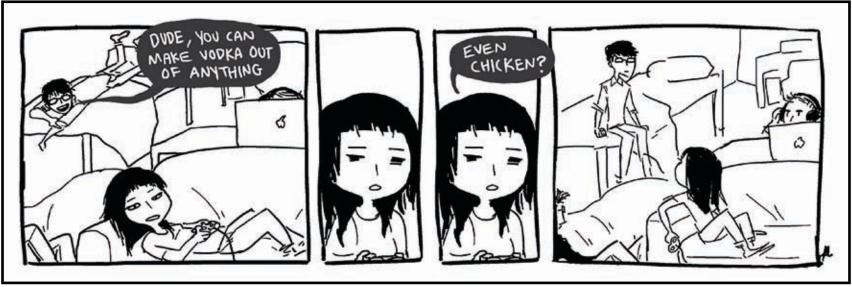
Chloe Thompson | Staffwriter

LaserScope by xkcd



press@xkcd.com xkcd.com

Tiger Wine by Angela Liu



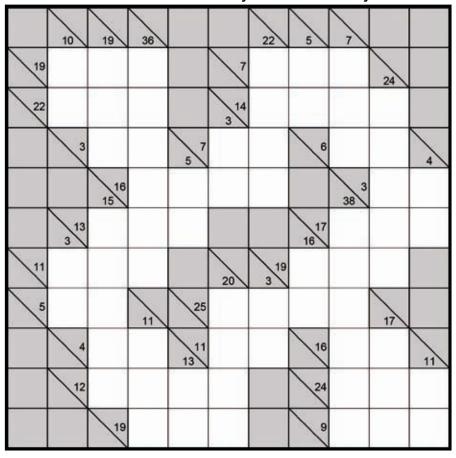
amliu@andrew.cmu.edu

The State of Men's Public Restrooms by Doghouse Diaries How men pee at home. How men apparently pee in public restrooms.

doghousediaries@gmail.com

thedoghousediaries.com

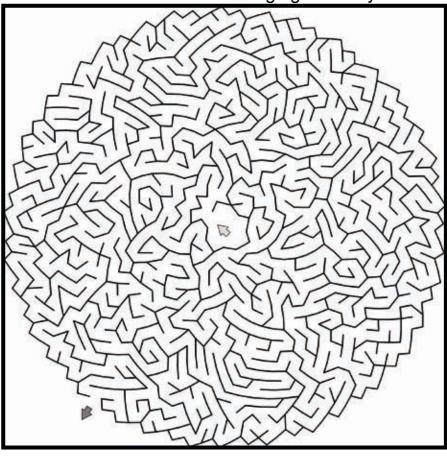
Kakuro Puzzle: Very Hard Difficulty



Kakuro courtesy of www.KrazyDad.com

Fill all empty squares using numbers 1 to 9 so the sum of each row equals the clue on its left, and the sum of each column equals the clue above it. No number may be used in the same row or column more than once.

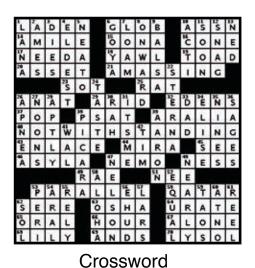
Maze Puzzle: Challenging Difficulty



Maze courtesy of www.krazydad.com

Start in the middle of the maze and find your way out.

Solutions from Nov. 25



11 3 8 11 2 9 7 24 7 9 8 11 8 9 11 1 2 3 5

Easy Difficulty

 5
 2
 6
 1
 3
 9
 8
 4
 7

 1
 9
 7
 4
 6
 8
 5
 3
 2

 8
 4
 3
 7
 2
 5
 6
 1
 9

 7
 5
 9
 2
 8
 3
 4
 6
 1

 3
 1
 2
 6
 5
 4
 9
 7
 8

 4
 6
 8
 9
 7
 1
 2
 5
 3

 9
 8
 5
 3
 4
 7
 1
 2
 6

 6
 3
 1
 5
 9
 2
 7
 8
 4

 2
 7
 4
 8
 1
 6
 3
 9
 5

Medium Difficulty

Horoscopes

aries march 21-april 19 "What we've got here is failure to communicate."

taurus april 20-may 20

"Why don't you come up sometime and see me?"

"I want to be alone."

may 21-june 21

gemini

cancer june 22-july 22 "Toto, I've got a feeling we're not in Kansas anymore."

leo

"I'm going to make him an offer he can't refuse."

july 23-aug. 22

virgo aug. 23-sept. 22 "With great power comes great responsibility."

libra

"Louis, I think this is the the beginning of a beautiful friendship."

scorpio oct. 23-nov. 21

sept. 23-oct. 22

"Listen to them. Children of the night. What music they make."

sagittarius nov. 22-dec. 21

"It's not who I am underneath, but what I do that defines me."

capricorn dec. 22-jan. 19 "Keep your friends close, but your enemies closer."

aquarius jan. 20-feb. 18 "Happiness is only real when shared."

pisces

feb. 19-march 20

"Life was like a box of chocolates. You never know what you're gonna get."

Maryyann Landlord | Comics Editor

1	2	3	4		5	6	7	8	9		10	11	12	13
14	T		T		15	T	T	T			16	T	T	T
17	T		T	18			T	t	T		19	H	T	\top
20	T	T		21	\vdash		${\mathsf T}$		22	23		H	T	十
24	T	t	25		\vdash			26		T	T			
			27	T	\vdash	28	29		T	\vdash	\vdash	30	31	32
33	34	35		T		36	T	t	T	\vdash		37	T	T
38	T	T	T		39		T	t			40		T	T
41	T	T		42			T	T		43		T	T	T
44		T	45		T		T	T	46		T			
			47		Т				48	T	T	49	50	51
52	53	54			Т		55	56		T		57	T	T
58	T	T	T		59	60		T	T	T	61		T	\top
62	T	T	T		63		\top	T	T		64	T	T	T
65	T	T	\top		66	T	T	\top	\top		67	T	T	\top

Crossword courtesy of BestCrosswords.com

ACROSS

- _ sow, so shall...
- 5. Take ___ at (try)
- 10. Arduous journey
- 14. Conks out
- 15. SeaWorld attraction
- 16. First name in jeans
- 17. Styptic
- 19. Long time
- 20. Washington bill
- 21. Humorist Bombeck
- 22. Deprived of life
- 24. Alberta's home
- 26. Canadian gas brand
- 27. Capital of Utah
- 33. Inflated
- 36. Noted spokescow
- 37. "The Simpsons" bartender
- 38. Top-notch
- 39-Stigma
- 40. I could ___ horse!
- 41. Miss Piggy's query
- 42. Garden figure
- 43. St. ___ fire
- 44. Capital of Madagascar
- 47. Knocks lightly
- 48. Degrees in a right angle
- 52. Automatons
- 55. Kiln for drying hops
- 57. Rap's Dr. _
- 58. Dentist's request
- 59. Dwelling
- 62. Magazine founder Eric
- 63. Express a viewpoint
- 64. Sometimes you feel like ___...
- 65. Cornerstone abbr.
- 66. Get ready to drive
- 67. Pro ___

Down

- 1. Committee type
- 2. City in Tuscany
- 3. Arabian republic 4. That, in Tijuana
- 5. Stellar
- 6. Ersatz
- 7. Cheerio!
- 8. Bordeaux buddy
- 9. Skin of a deer
- 10. Aztec god of rain
- 11. Lively dance
- 12. Bacchanalian cry
- 13. Compassionate
- 18. Family car
- 23. Aha!
- 25. Even ___ speak...
- 26. Simpler
- 28. Wyoming range
- 29. South American ruminant
- 30. Muslim leader
- 31. Baum barker
- 32. Some votes
- 33. Crimson Tide, for short
- 34. Crazy as a _
- 35. Put a lid __
- 39. Photograph
- 40. North Carolina university
- 42. Midge
- 43. Madonna role
- 45. Did penance
- 46. Part of the foot
- 49. Minneapolis suburb
- 50. Freshwater fish
- 51. Nosy Parker
- 52. Chooses
- 54. Crooked
- 55. Off-Broadway theater award
- 56. Hokkaido native
- 60. King Kong, e.g.; 61- Sailor

TUESDAY 1.21.14

Jay-Z. CONSOL Energy Center 8 p.m.

The man who puts the business in the music business will be making a stop in Pittsburgh as part of his "Magna Carter World Tour." He's got 99 problems, but getting you to pay to come see him rap about how much more money he has than you ain't one.

School of Art Lecture Series presents Emily Cheng. Kresge Theatre, CFA. 5 p.m.

Rough Cheng is a visual artist who lives and works in

New York City. Her work has toured nationally and internationally. She is also a published author.

WEDNESDAY 1.22.14

Nick Hexum Quintet. Stage AE. 7 p.m.

The new project from the guitarist from 311, The Nick Hexum Quintet is an alternative band that features elements of funk, jazz, pop, rock, soul, reggae, and blues.

Greensky Bluegrass. Rex Theater. 8 p.m.

As their name suggests, all attendees will be treated to some fine American bluegrass tunes.

THURSDAY 1.23.14

Dopapod w/ Broccoli Samurai. Rex Theater. 8 p.m. Electronic jam-band Dopapod will be jamming on some groovy vibes with Broccoli Samurai in support.

PSO presents The Music of John Williams.

Heinz Hall. 8 p.m.

Seeing as a greatest hits of movie soundtracks could be



made strictly out of John Williams's songs, this promises to be a wonderful night of music.

FRIDAY 1.24.14

Bruce in the USA. Altar Bar. 9 p.m. 21+

Everyone wants to be The Boss, and these guys are lucky enough to live the dream. Whether or not they'll show up in ripped jean jackets and long flowing hair has yet to be seen.

Gallery Crawl. Cultural District. 5:30 p.m.

A free quarterly showcase of art and entertainment in the heart of the Cultural District. All events take place at a variety of galleries and spaces and are FREE and open to the public. The event is ongoing from 5:30 until 9:00 p.m., and patrons may start at any location.

SATURDAY 1.25.14

Pixies w/ FIDLAR. Carnegie Music Hall. 8 p.m. The groundbreaking alternative rockers are touring with a new lineup and new material. FIDLAR will be opening, and may play their song(s) about how much they love cheap beer.

Dark Sisters. CAPA Theater. 8 p.m.

This opera tells the story of sister-wife Eliza. After a raid on her family's compound, Eliza embarks on a quest for self-discovery. Her journey is burdened by tragedy and strife, in a work that "evokes the jittery buzz of reality television," according to *The New York Times*.

Strike Duo. The Warhol Theater. 8 p.m.

Strike Duo is pianist Jeffery Meyer and percussionist Paul Vaillancourt, who will play music by Chen Yi, Brooke Joyce, Marc Mellits, Eric Moe, Mario Davidovsky, and more.

ONGOING

Wicked. Benedum Center. Through Feb. 9
The hit Broadway musical is returning to Pittsburgh.
Telling the story of the *Wizard of Oz* from an alternate perspective — the Wicked Witch's —, the show features amazing songs and is not to be missed.

"Arena: Remembering the Igloo". 707 Penn Gallery. Through Mar. 2

The exhibition presents a visual record of Pittsburgh's Civic Arena's last months in operation and during its yearlong demolition process.

"Neverlands". 709 Penn Gallery. Through Feb. 23 Inspired by *Peter Pan* and fears of death, this collection is one of a kind.

"Behind our Scenes". SPACE Gallery. Through Jan. 26 Behind Our Scenes offers a diverse and thought-provoking exhibition of photographs.

2013 Carnegie International. Carnegie Museum of Art. Through Mar. 16

The Carnegie International is the oldest North American exhibition of contemporary art from around the globe.

OPENING

Company. O'Reilly Theater. Jan. 23-Feb. 23 *Company* is a musical whose plot revolves around Bobby (a single man unable to commit fully to a steady relationship, let alone marriage), the five married couples who are his best friends, and his three girlfriends.

"Structures of Time and Space". Wood Street Galleries. Jan. 24-Apr. 6 A collection of large scale light instillations from artist Erwin Redl.

Compiled by **Joey Peiser** | Pillbox Editor Want your event here? Email *calendar@thetartan.org*

McConomy Auditorium, University Center

Andie Park | Staffwriter

Captain Phillips

Friday, Jan. 24 — 8 p.m., 11 p.m. Saturday, Jan. 25 — 8 p.m.

Imagine yourself as a merchant mariner captaining a U.S. container ship through Africa, when suddenly a group of armed Somali pirates hijack your fleet. *Captain Phillips*, up for Best Picture at the Oscars, takes place in the year 2009 and is based on true events. Director of *The Bourne Supremacy* and *The Bourne Ultimatum* Paul Greengrass steers this compelling story of how Captain Richard Phillips (Tom Hanks) courageously handles a hostage situation that seems almost impossible to believe. Barkhad Abdi makes his film debut as the leader of the pirates and is truly a force to be reckoned with. Despite his gaunt frame, his instinctive performance is so terrifying that it's believable he could take over an entire ship. In one of the best films of the year, *Captain Phillips* takes you on an unforgettable ride.

Ender's Game

Saturday, Jan. 25 - 11 p.m. Sunday, Jan. 26 - 8 p.m.

Based on the best-selling young adult series, *Ender's Game* by Orson Scott Card was one of the best blockbusters of 2013 about a brave teenager battling a new alien race, called the Formics, that attempt attack the Earth. This isn't another *Hunger Games*: *Ender's Game* is a compelling film with themes of child soldiers and genocide, coupled with incredible visuals that make it an easily enjoyable, fantastical realm of science fiction. However, it's not just a popcorn-munching film filled with explosions and aliens, and it's not a Michael Bay movie — it's so much more. The incredible depth of the film is dazzling, and the questions it leaves its audience about the nature of humanity are intriguing.

calendar 15

dancer's symposium.



Maryyann Landlord | Comics Editor

Junior design major Sam Ahmed auditions for the spring Dancer's Symposium. Dancer's Symposium is intended to showcase dance, music, student choreography, and student performance at Carnegie Mellon. To audition, students need not have any dance experience, just a willingness to learn and enjoy themselves.