



CUC expansion officially breaks ground



Students got the opportunity on Thursday to spraypaint their mark on the CUC Turnaround, which will be closed as part of an 18-month expansion.

LAURA SCHERB
Operations Manager

On Thursday, a modest ceremony marked a big occasion for the university: the official groundbreaking celebration of the Jared L. Cohon University Center (CUC) expansion. The expansion has already begun with construction on the campus parking garage, and is estimated to take approximately two years. The completed project will add 62,000 square feet to the building, according to the Campus Design and Facility Development’s Cohon Center Addition page. The ceremony celebrated the efforts of a large group of people in making the project a reality, and the official groundbreaking of the construction. To that end, senior biological sciences major and Student Body Vice President Shalini Ray, Vice President for Student Affairs Michael Murphy, and Pittsburgh City Councilman and Carnegie Mellon alumnus Dan Gilman (DC ’04)

spoke. Student groups Raasta, SoulStylz, and Scotch’n’Soda performed as well. After the speeches and performances, the Office of Student Activities gave students and faculty an opportunity to spray paint a portion of the CUC turnaround to commemorate the years that it has served as a Carnegie Mellon landmark. “I’m very excited about the whole impact that [the expansion] will have on the student experience,” Gina Casalegno, dean of student affairs, said. Casalegno spray painted “My heart is in the CUC expansion” on the pavement. The expansion of the CUC, which was built 18 years ago, marks the symbolic expansion of what Murphy called the “meta-curricular” life of Carnegie Mellon students. “Ten years ago, we saw an explosion of student on-campus involvement. Students use the CUC to recreate, to work out, to meet with each other and with faculty, and to communicate their student experi-

ence. This expansion is the opportunity to enhance what we already have,” Murphy said in his speech. “A healthy and socially engaged campus.” According to Murphy, the expansion is a result of the vision that President Emeritus Jared Cohon and current President Subra Suresh have for the student experience, as well as part of an effort to give the Forbes Avenue corridor a “front door.” “This is a project that ties very nicely into our new Forbes corridor. It really paints CMU as a place for innovation, a place for everything that CMU is truly about,” Murphy said. “It’s really exciting, and the context is so important for this project.” Gilman, who spoke following Murphy, said that the project was exciting and important to him not only as a former student, but also as a representative of the district. “[Carnegie Mellon] is embracing Forbes Avenue; we’re giving a new face to the future of Forbes, which will add defi-

nition to campus. This building is a huge part of that,” Gilman said. “I am fortunate to represent a district that encompasses a booming center of growth.” According to Director of Student Activities Elizabeth Vaughan, the expansion of the CUC is going to radically impact campus life through the massive increase in athletic and recreational space, a studio theater, and a new lobby space that will serve to welcome visitors to the university. “In planning this building, we leveraged every possible space in the building to be able to accommodate every type of activity. We thought really strategically about how to maximize every space. There’s too much happening on this campus to let any space just sit unused,” Vaughan said. According to Vaughan, the construction on the building is slated to take approximately 18 months, which would put the opening ceremony some-

See **EXPANSION**, A4

Acrobatiq a finalist for \$20 million prize

CHELSEA DICKSON
Junior Staffwriter

Acrobatiq, a Carnegie Mellon-affiliated online courseware company, has recently been named a finalist in the Bill and Melinda Gates Foundation’s Next Generation Courseware Challenge. Tracing its origins to Carnegie Mellon’s Open Learning Initiative (OLI), Acrobatiq was founded in 2013 and provides individualized online learning experiences for students tackling introductory university courses. The Bill and Melinda Gates Foundation launched the Courseware Challenge to support science-based learning initiatives that aim to help disadvantaged college students with general education classes. The Bill and Melinda Gates Foundation focuses on improving all Americans’ opportunities for success both in the classroom and in life. The Foundation began supporting online education programs in 2008, prompted by the increasing amount of research showing the impressive improvements made by students who supplemented their undergraduate courses with online learning experiences. Since 2008, it has invested more than \$60 million in online courseware, according to its website. The Next Generation Courseware Challenge is the Foundation’s effort to bring this learning technology to under-performing and disadvantaged college students. Seventeen finalists, including Acrobatiq, are currently beginning to receive portions of the \$20 million prize. The actual winner will be announced later this year and will work with the Foundation for three years to strengthen its product. Acrobatiq is a subsidiary of Carnegie Mellon’s Open Learning Initiative, which was established in 2001. The OLI combines the University’s strength in cognitive tutoring, human-computer interaction, and data-driven

sciences to create online courses. OLI courses are used by teachers and students nationwide and internationally. Its strength stems from its ability to constantly evaluate, adapt, and improve the design of courses for more successful learning experiences, according to the OLI website. Based in Pittsburgh’s South Side neighborhood and New York City, Acrobatiq is building on OLI’s legacy. Acrobatiq, a for-profit company, develops new adaptive online courses using OLI, Carnegie Mellon, and the educational world’s research. Students must self-monitor their learning progress in Acrobatiq’s courses and apply what they are learning to real-world situations. Courses are designed to supplement undergraduate level classes. As of now, many of the courses available are math- and science-oriented. Acrobatiq chief executive officer Eric Frank, speaking about the courses, reported that the company will be offering 25 new courses, including many in the humanities and business, by the summer. Frank also said course design does not widely differ between science and humanities classes. In fact, he said, learning research has proved that the process of learning is consistent across subjects, languages, and cultures. He explained that the “learn by doing” method is what leads most students to success, hence the effectiveness of these online courses. “It seems like we live in this moment where the Internet is this incredible medium to access to education. What’s been missing is quality. How do you ensure that a student is able to learn as much or more? There has to be robust learning,” said Frank. Of course, many people are wary about online coursework’s effect on higher education institutions. Frank

See **COMPANY**, A3

Herbert lectures on education reform

CHRIS GALVIN
Staffwriter

On Thursday, public education volunteer organization Yinzercation hosted the national launch of *The New York Times*’ columnist Bob Herbert’s new book, *Losing Our Way: An Intimate Portrait of a Troubled America*, in McConomy Auditorium. Yinzercation describes itself on its website as “part of the grassroots education justice movement committed to students, equity, and the preservation of public education as a civil right and a public good.” The group also hosts a multitude of events to promote their cause, including rallies, demonstrations, and lectures. Reverend Richard Freeman of the Resurrection Baptist Church in Braddock kicked off the event with a speech about the importance of public education. “We are at a crossroads,” Freeman said. “And we believe that the way through the crossroads begins with quality education. It begins by giving our children hope.” Jessie Ramey, a member of the Yinzercation Steering

Committee, followed with a description of Yinzercation and its purpose. “We joined the education justice movement back in 2011 when Governor Corbett took office and promptly cut about a billion dollars from public education,” Ramey said. “These cuts have disproportionately affected our poorest students and our communities of color. So our schools and kids who already had the least, now get the least.” Kathy Newman, associate professor of English at Carnegie Mellon and another Yinzercation Steering Committee member, then introduced Herbert and Tony Norman, a columnist, associate editor, and book review editor for the *Pittsburgh Post-Gazette*. Norman moderated a conversation with Herbert about his book, public education, and social justice movements. Much of the discussion revolved around the Yinzercation movement. “There were two major things that I saw [in Pittsburgh],” Herbert said. “One

See **EDUCATION**, A3

SCS celebrates 25th anniversary



Serkan Piantino (SCS ’04) had a conversation with Dean of the School of Computer Science Andrew W. Moore as part of a celebration of the school’s 25th anniversary. Moore and Piantino spoke in Rashid Auditorium on Friday about the future of computer science.

MARIE BREMNER
Junior Staffwriter

In this age of Big Data, digital technologies, and social networking sites, companies are grappling with consumer privacy. According to Carnegie Mellon alumnus and Site Director of Facebook’s New

York office Serkan Piantino (SCS ’04), who spoke as part of the School of Computer Science’s (SCS) 25th anniversary celebrations, computer scientists must take the lead in making policies and creating technologies that deal with these privacy issues. “We have to have a con-

versation. Technology has created so much potential for data interaction, and with that comes great potential for risks. We, the engineers, need to have a sophisticated dialogue about having a good, nuanced, ethical understanding of how we want our data represented and shared,” Pi-

antino, who oversees Facebook’s engineering office in Manhattan, said. “When you are learning software engineering, you have to be learning about policy implications; there is no such thing as a pure

See **CELEBRATION**, A4

FEATURE PHOTO

Students sign beam, indulge in chili



Last week, students got the chance to sign a beam that will become part of the Sherman and Joyce Bowie Scott Hall.

Ryan Oh/Staff Photographer



The Carnegie Clan hosted its annual Chili Cookoff as part of the C ilidh Weekend homecoming celebrations. At the cookoff, students tasted the entrants' chili with cornbread and received commemorative Chili Cookoff mugs.

Abhinav Gautam/Staff Photographer

Campus Crime & Incident Reports

Student on LSD

Oct. 4, 2014

University Police, along with CMU EMS and city medics, responded to a report from the Residence on Fifth of a student on LSD. The student was provided appropriate medical attention and admitted to ingesting an unknown drug at a party near the Bob O'Connor Golf Course at Schenley Park. University Police and Pittsburgh Police were involved in investigating this incident.

Alcohol amnesty

Oct. 6, 2014

University Police and CMU EMS were summoned to the Mudge House turnaround by a call for alcohol amnesty. CMU EMS provided medical attention, and no charges were filed.

University Police and CMU EMS also responded to Fairfax Apartments for alcohol am-

nesty. Again, no charges were filed.

Suspicious vehicle

Oct. 8, 2014

University Police and Pittsburgh Police responded to a call from Beeler Street about a suspicious vehicle. Police received two calls for related incidents. A Carnegie Mellon student told the police that he was walking on Beeler Street when a black sedan pulled up next to him and shined a light on him, at which point the student began to run, and the vehicle pulled into a driveway. A moment later, the vehicle drove away toward Wilkins Avenue. Another student reported a similar experience. These incidences are being investigated by both University Police and the Pittsburgh Police Department.

DUI arrest

Oct. 8, 2014

A University Police sergeant on patrol saw a vehicle driving over the center line on Morewood Avenue, and confirmed that the driver was intoxicated when the sergeant stopped the vehicle. The driver was arrested for driving under the influence of alcohol.

Theft from a vehicle

Oct. 9, 2014

University Police took a report for theft from a vehicle parked on Devon Road. The perpetrator broke the side window of the vehicle and took several personal items. There have been multiple similar thefts around the Carnegie Mellon campus recently. Both University Police and the Pittsburgh Police Department are investigating these incidents.

Attempted scam

Oct. 9, 2014

University Police were contacted by two students about a black, middle-aged woman who pulls up next to students on the street and asks for gas money to get to the airport or hospital. These scams were also reported last year; students are urged not to provide the woman with money or personal information and contact the police if she makes contact.

Identity theft

Oct. 10, 2014

University Police are investigating an incident in which an unidentified woman tried to use a Carnegie Mellon ID card to check out an iPad from Hunt Library. University Police are investigating this incident with the help of video surveillance.

Compiled by
BRIAN TRIMBOLI

NEWS IN BRIEF

CNBC celebrates 20th year of research

Much of the university's brain research began 20 years ago, when the Richard King Mellon Foundation gave a \$12 million gift to launch the Center for the Neural Basis of Cognition (CNBC), a research center built on collaboration between Carnegie Mellon and the University of Pittsburgh that focuses on neuroscience. More recently, Carnegie Mellon announced its BrainHub initiative in support of the federal BRAIN initiative for neuroscience research.

The CNBC will celebrate its 20th anniversary this weekend, Oct. 17–18.

“To have two universities across the street from each other, and to have them decide to collaborate rather than compete, is very special,” said Peter L. Strick, Pitt co-director of the CNBC, distinguished professor, and chair of the department of neurobiology at Pitt, in a university press release. “The CNBC has an open architecture that allows interactions between scientists and colleagues — regardless of

their home institution. Students can seamlessly move between Pitt and CMU labs and draw on the expertise of faculty at both institutions. This cross-disciplinary and cross-university atmosphere has allowed the CNBC — and therefore CMU and Pitt — to recruit and keep scientists and researchers and attract the brightest students.”

The CNBC is a joint effort between the neighboring universities that combines the University of Pittsburgh's strengths in bioengineering, math, psychology, and neuroscience with Carnegie Mellon's strengths in psychology, computer science, biology, and statistics.

Researchers for the CNBC investigate the mechanisms behind human cognition; the CNBC also includes an interdisciplinary graduate and postdoctoral training program.

The 20th anniversary celebration will include several keynote and alumni speakers, an art exhibit, and the presentation of the first Friend of the CNBC Award.

Philosophy department partners with Pitt

The National Institutes of Health (NIH) recently gave an \$11 million grant to create the Center for Causal Modeling and Discovery, a joint effort between Carnegie Mellon's department of philosophy and the University of Pittsburgh.

The new center will foster collaboration between Carnegie Mellon philosophy faculty and a team of researchers that draws from the Pittsburgh Supercomputing Center, Yale University, Rutgers University, and other collaborators. The researchers will focus on developing tools that can find causal links in large and complex pools of biomedical data.

Gregory Cooper, professor and vice chair of the department of biomedical informatics at the University of Pittsburgh School of Medicine and director of the new Center for Causal Modeling and Discovery, said in a university press release that while much of science focuses on finding the “how” or “why,” now the challenge is to find these answers among “big data” — corpuses of terabytes or petabytes of data.

Compiled by
BRIAN TRIMBOLI

WEATHER



TUESDAY

High / Low
82 / 64



WEDNESDAY

High / Low
66 / 53



THURSDAY

High / Low
65 / 53



FRIDAY

High / Low
64 / 49



SATURDAY

High / Low
60 / 42



SUNDAY

High / Low
54 / 38

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

Finance committee update, special allocation

A first draft of a fiscal policy change was completed and is now being reviewed by multiple student governing bodies to ensure that its wording is consistent. Additionally, \$4,000 was reinstated to be available to Senate for internal projects.

A finance allocation to AB Tech was also granted for new

equipment, as some equipment for events could not be used due to the building constraints of the Jared L. Cohon University Center. It was noted that the Activities Board serves many organizations, and that there are currently many senior members who can teach newer students how to use the new tools.

Ex officio Report

Jess Klein, coordinator of gender studies and sexual violence prevention, discussed rape prevention and sexual assault on college campuses in her ex officio report.

Carnegie Mellon's recent efforts to address this issue began about a year ago. Klein discussed many measures for preventing sexual assault, in-

cluding primary prevention through education and bystander training, secondary prevention strategies such as having a buddy system and covering your drink at parties, as well as other tips such as not walking alone at night. Klein also detailed the purpose of the Jeanne Clery Act, specifically with respect to confidentiality

and how Carnegie Mellon is legally required to report and investigate all reports of sexual violence.

On-campus resources, including the new *Decisions that Matter* pamphlet and the Title IX reporting process, were also mentioned. Klein concluded her report by mentioning the difficult nature of gathering

statistics on instances of sexual violence and the focus sessions that were hosted on campus by the Department of Education's Office for Civil Rights recently.

Compiled by
BRENT HEARD



Yinzercation hosts *New York Times’* Bob Herbert



Left: Bob Herbert, a columnist for *The New York Times*, spoke about his new book, *Losing Our Way: An Intimate Portrait of a Troubled America*, on Thursday in McConomy Auditorium. **Right:** Herbert talked to Reverend Richard Freeman of the Resurrection Baptist Church in Braddock.

EDUCATION, from A1

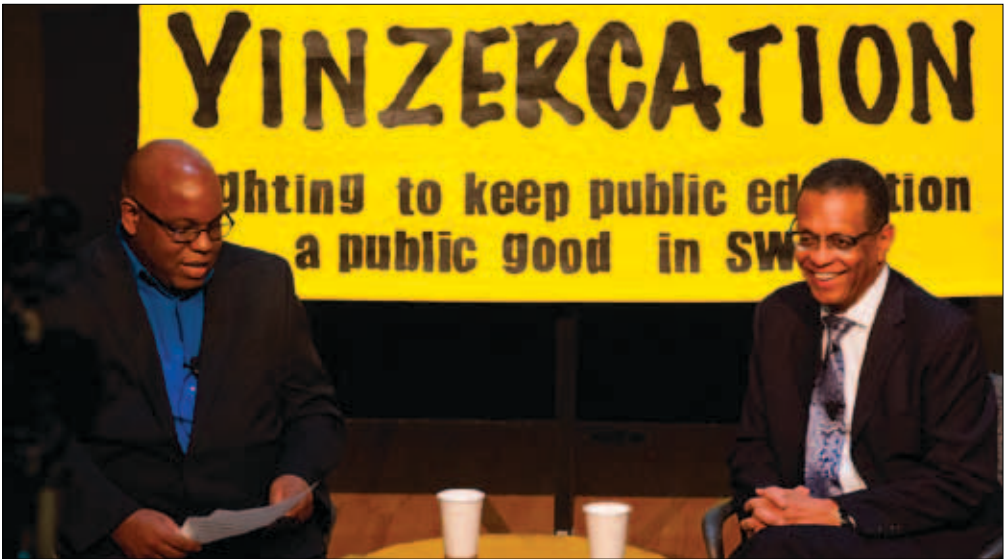
was what I thought was an obscene attack on public education ... but then on the other hand, I saw this extraordinary civil engagement, this movement of ordinary people who are fighting back and saying that this is intolerable.”

Herbert talked about how the themes of his book tie into Pittsburgh’s public education movement.

“[In my book] I wanted to

show how in so many ways we’ve lost our way in this country, how much trouble we’re in,” Herbert said. “I thought that the mainstream politicians and the mainstream media had not really given a true picture of how difficult our circumstances were. On the other hand, I wanted to say that it’s not hopeless, that people can fight back. In Pittsburgh, I saw people fighting back, and fighting back effectively.”

Norman and Herbert



Kevin Zheng/Junior Photographer

also discussed the aspects of a successful social justice movement.

“It’s important to first become civically engaged, whatever the issue is... But its also important that you organize,” Herbert said. “The most difficult thing of all is to sustain it. It has to be a sustained effort.”

When the discussion was opened to questions from the audience, the conversation broadened into a discussion of

progressive politics, economic problems, and social issues as a whole.

Some members of the audience, such as Pittsburgh residents Paul and Karen Beer, felt the discussion had gotten off track.

“It was a little all over the place; it was a little disappointing,” Karen Beer said.

“[The discussion] just wasn’t very substantive. It was riddled with political platitudes,” Paul Beer said. “It was

speaking very abstractly about problems, and unfortunately I felt like I was at a political rally.”

Others left feeling dejected, despite Herbert’s intended message of hope.

“I feel kind of desperate—what are we going to do?” said Osher Lifelong Learning Institute member Florence Chapman. “Working on the grassroots organizing is difficult. We’ve been working on that for a long time.”

Acrobatiq finalist in challenge

COMPANY, from A1

believes that companies like Acrobatiq will aid, and not undermine, teaching and learning at universities and colleges.

“I think there’s a fear of machine learning, because I think that’s a code word for ‘replace faculty,’ and I think that when teachers see what we’re doing, they see that it’s an opportunity to help them do what they’re doing better,” he said. For Frank, including online coursework in college classes enables more effective instruction in the classroom. He said that while students are building their foundational knowledge with online classes, precious in-class time could be used more advantageously.

Acrobatiq and similar companies aim to provide a supportive opportunity for a better standard of learning for both disadvantaged and privileged students.

The Last Witch Hunter films in Pittsburgh locations



Left: The crew for *The Last Witch Hunter* prepares for filming last week on Forbes Avenue. **Right:** Extras for the film, which stars Vin Diesel, Elijah Wood, and Rose Leslie, sit on set.

JUSTIN MCGOWN
Staffwriter

Just around the corner from the Mellon Institute, recognizable from its role as Gotham City Hall in *The Dark Knight Rises*, trailers lined both sides of a blocked off Forbes Avenue

Extension, as well as a lane of traffic on Forbes Avenue as caterers, riggers, and actors hurried around. The Carnegie Music Hall was standing in for an elegant opera house or theatre in New York City for *The Last Witch Hunter*, a supernatural action thriller from Lionsgate

Studios with an all-star cast and a mainly local film crew.

Vin Diesel, a veteran of the *Riddick* science fiction action franchise, will star as the titular last witch hunter. Diesel will be starring alongside Elijah Wood, who portrayed Frodo Baggins in *The Lord of the Rings* tril-

ogy; Rose Leslie, best known for her television role as Ygritte on *Game of Thrones*; and Sir Michael Caine. Breck Eisner, the director of *The Crazies* and *Sahara*, has the helm on *The Last Witch Hunter*. Vin Diesel is also one of the producers of the film, alongside Mark Canton

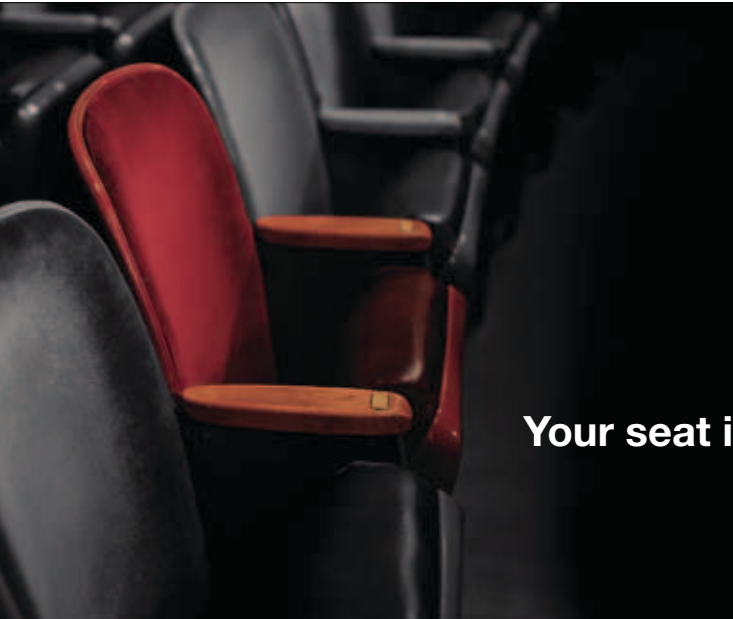
and Bernard Goldmann.

According to Amanda Brand, the unit publicist for the movie, a number of locations around Pittsburgh will be used as stand-ins for New York City. Brand cited initiatives and tax credits offered by the city for the choice of filming, in addi-

tion to the quality film crew in the city. Brand has previously worked on *I Am Number Four* and *Super 8* with Pittsburgh film crews, even though *Super 8* was shot in West Virginia. Brand described working here with the crews as a great experience.



Justin McGown/Staff Photographer





OCT
22–25
2014

Your seat is waiting.

Benjamin Britten’s The Beggar’s Opera



Philip Walsh, conductor
Dan Rigazzi, stage director

FREE
WITH
CMU ID
\$5-\$10 Tickets

music.cmu.edu  

or 412.268.2407

Carnegie Mellon University
School of Music



Souter stresses humanities in U.S.

BRIAN TRIMBOLI
News Editor

“We cannot give short shrift to the humanities and social sciences,” retired Supreme Court Justice David Souter told a standing-room only McConomy Auditorium last Friday.

Souter delivered his lecture, “The Heart of the Matter: The Humanities and Social Sciences for a Vibrant, Competitive, and Secure Nation,” as part of the John and Mary Lou Lehoczy Lecture Series in the Humanities and Social Sciences.

Souter was brought to Carnegie Mellon with the help of the university’s Center for International Relations and Politics (CIRP) and the American Academy of Arts & Sciences, an organization that supports humanities research and education in the U.S., according to its website.

Souter was appointed to the Supreme Court in 1990 by President George H. W. Bush after a career in the state courts of New Hampshire, and retired from the Supreme Court in 2009.

After University President Subra Suresh introduced him, Souter, a graduate of Harvard College and Harvard Law School, made a

case to listeners that the U.S. should put greater stress on the humanities and social sciences as the foundation of education.

“A lot of this is going to be obvious,” Souter said about the points in his lecture. “But I want the obvious to be on the table.”

Souter opened his lecture with a story about William Howard Taft, the 27th president of the United States. Taft, Souter said, was able to think about problems in different ways — one of the main benefits that Souter said a liberal arts education provides.

Souter used a quote by poet John Donne as the first piece of evidence in his lecture: “No man is an island.”

Souter pointed out how different experts in different fields of the humanities — from psychology to theology — would interpret the quote, saying that “Your perspective is going to affect how much you look at the question, just as much as it affects how much you look at the answer.”

Throughout his lecture, Souter stressed the importance of different perspectives. An education in the humanities, Souter said, gives people the ability to look at a question or problem from dif-

ferent angles, with different perspectives.

Julia Eddy, a junior decision science major, agreed with Souter’s emphasis on the humanities. “I think it was really valuable. I used to not put a lot of value in the humanities,” Eddy, who recently switched her major from electrical and computer engineering to decision science, said. “Since I just switched my major from engineering to the humanities, the lecture really resonated with me.”

Sophomore mathematics major Ryan LaPré had similar thoughts about Souter’s lecture. “In general, I agree with Souter in that a vital part of the future of education should focus on the intersection of a social sciences-based creativity, as well as some application of technology,” LaPré said. “Especially at a school like CMU, where we promote this mindset in our curriculum and programs.”

Souter closed his lecture by comparing the U.S. to China, which recently surpassed the U.S. as the world’s largest economy, according to the International Monetary Fund. China, Souter said, is laying a foundation in humanities for a future of smart economic decisions while the U.S. lags behind.



Piantino speaks at SCS celebration



Abhinav Gautam/Staff Photographer
Serkan Piantino (SCS '04), the site director of Facebook's New York office, spoke on Friday about the future of the computer science industry.

CELEBRATION, from A1

technology,” added Andrew W. Moore, the dean of SCS, an expert in artificial intelligence and robotics, and a former executive at Google.

Piantino and Moore shared their visions for the future of the industry before a packed audience of students, alumni, and faculty members in Rashid Auditorium as part of a celebration of SCS’s 25th anniversary on Friday.

Moore and Piantino also discussed how computers and mobile devices are changing our lifestyles. With smart-phone apps completely infused into our lives and wearable devices becoming more and more prevalent, “a lot of our industry is in this pause-mode, waiting to see how the iWatch does,” Piantino said in reply to a question regarding the future of technological accessories.

This year, the School of Computer Science celebrates its 25th year as a stand-alone

college within Carnegie Mellon University. The School of Computer Science is considered one of the world’s premier programs in the field.

The story of this college goes back further, however: A decade or so after the emergence of the first computer, Carnegie Mellon’s Department of Computer Science was formed in July 1965 by a group of visionary enthusiasts comprising Allen Newell, Herbert Simon, and Alan Perlis.

By the early 1960s, the university offered an interdisciplinary Ph.D. program called systems and communications sciences. Over the decades, the School of Computer Science has expanded and created new degree-granting departments such as the Human-Computer Interaction Institute and the Institute for Software Research. The Robotics Institute, also a division of the school, is the largest university robotics research group in the world.

In a separate panel discussion titled “SCS25: The Next 25 Years of Computer Science,” led by Corporate Vice President and Head of Microsoft Research Peter Lee, the panelists included Severin Hacker (SCS ’09, ’14), Assistant Professor of computer science Emma Brunskill, and Assistant Professor of computer science Aarti Singh, who discussed their research and what trends they see evolving during the next 25 years.

“From the beginning, the School of Computer Science has drawn on the expertise of psychologists, management specialists, mathematicians and electrical engineers,” said Majd Sakr, founder and director of the Cloud Computing Lab at Carnegie Mellon’s Qatar campus.

“We’ve had a lot of diversity, and that is why we are uniquely positioned to be able to make an impact that will make a difference in the way technology is designed,” Sakr said.

“What’s coming next is human enhancement,” said former School of Computer Science professor Nathaniel Borenstein (SCS ’85), who helped design the MIME protocol for formatting multimedia Internet electronic mail.

Borenstein is working on creating digital eyeglasses that may someday assist people with colorblindness, as well as allow humans to see in infrared and ultra-violet spectrums. Borenstein’s work, he said, comes from his own imagination, adding that that sort of thinking is encouraged at Carnegie Mellon.

“There is a real culture here [at Carnegie Mellon] that none of us is really satisfied. We are constantly thinking about the future, and we think it’s fun to have this opportunity to change, as well as feeling a sense of earned responsibility for it. We really do need to debate amongst all of us how should those 25 years go,” Moore said.

CUC officially begins 18-month expansion

EXPANSION, from A1

time next spring, if all goes according to plan.

“How this project came to be is so unique and indicative of the partnership between student affairs and athletics,” Vaughan said. “Everyone working on this project is incredibly passionate about the student experience and wants the CUC to be the hub of on-campus life to address the needs that have existed for a very long time.”

Vaughan, who spray-painted “Tartan Pride” on the turnaround, said she is most excited to see what the campus does with the space that it will be given.

“After being here for 10 years, I’m consistently surprised by the ways that the students here dream and come up with creative ideas. How we are envisioning the space being used might turn out to be very different from how the students actually use it, because they’re constantly dreaming and coming up with totally different ideas,” Vaughan said. “I’m sure that within a year, we’ll see a great new event crop up as a result of the new space and the new opportunities that come with it.”

Editor’s Note: Elizabeth Vaughan is faculty advisor to The Tartan.



Abhinav Gautam/Staff Photographer
The CUC expansion celebration on Thursday included a barbecue in the newly renovated Legacy Plaza.



HALF OFF*

EYEWEAR IN OCTOBER

UPMC Eye Center Optical Shops

Visit our four convenient locations

Oakland-Forbes Ave. 412-647-PITT (7488)

Oakland-UPMC Presbyterian
412-647-2145

Uptown-UPMC Mercy
412-232-8520

UPMC Children’s Pine Center
724-940-6160

UPMC.com/Optical

*Excludes Maui Jim and Oakley brands. Applies to prescription or non-prescription glasses and sunglasses.

UPMC

**LIFE
CHANGING
MEDICINE**

Affiliated with the University of Pittsburgh School of Medicine, UPMC is ranked among the nation’s best hospitals by U.S. News & World Report.

Science & Technology

New robots snake their way up sand



Carnegie Mellon researchers mimic the locomotion of sidewinder rattlesnakes in modular snake robots.

Courtesy of Hamid Marvi

ADITHYA VENKATESAN
Junior Staffwriter

Snakes are interesting creatures, but what makes them extremely interesting to study for applications in robotics is the ways in which they move. Researchers from Carnegie Mellon, Georgia Institute

of Technology, and Oregon State University, as well as from Zoo Atlanta, have been studying *Crotalus cerastes*, more commonly known as the sidewinder rattlesnake. These snakes have the unique ability to move across sandy, sloping areas. Unfortunately, replicating this task in robot snakes proved difficult for the

researchers. Modular snake robots at Carnegie Mellon University were able to travel along level ground, but were unable to go up sandy slopes, which made these types of robots unreliable for certain applications, such as in the sandy environment of another planet. Through studying the

snake, the researchers discovered some of the secrets behind its motion. Both the vertical and horizontal motion had to be understood in order to properly emulate it. This movement translated to a unique wave motion that would allow the snake to

See **SNAKE**, A6

Cell mechanics play a role in the spread of cancer

BROOKE KUEI
SciTech Editor

According to the American Cancer Society, the predicted number of cancer cases to be diagnosed by the end of 2014 is approximately 1.7 million, with the number of Americans expected to die from cancer this year at 585,720. In the face of these daunting numbers, Carnegie Mellon associate professor of chemical engineering and biomedical engineering Kris Dahl has found a new way to prevent cancer cells from spreading — by changing the cells’ mechanical behavior. In a study that was part of a collaboration with researchers from Pennsylvania State University, Dahl introduced $\Delta 50$ lamin A, a protein that is associated with normal and premature aging, into cells which cause melanoma, a type of skin cancer. By monitoring the migration of melanoma cells using a flow migration apparatus, Dahl found that as a result of this addition, the nuclei of

the melanoma cells began to stiffen, impeding metastasis, the spread of cancer cells into other parts of the body. According to the abstract of the paper regarding this research, which was recently published in the journal *Cellular and Molecular Bioengineering*, “During metastasis, melanoma cells must be sufficiently deformable to squeeze through extracellular barriers with small pore sizes.” Consequently, with stiffened nuclei, these cells were unable to pass through extracellular barrier pores. This finding is especially interesting because it suggests that it is not just the biology and chemistry — but also the mechanics — of cells that affect their behavior. “Cancer is a mechanical disease,” said Dahl in a university press release. “Cancer cells have different mechanics than other cells in the body. We were able to alter the mechanics to reduce

See **CANCER**, A6

PUGWASH COLUMN

In climate debate, people must consider mitigation or adaptation



ZEKE ROSENBERG
Sports Editor

ROB MACEDO
Special to the Tartan

At the last Pugwash meeting, we discussed whether or not the world’s climate change policies should tend toward mitigation or adaptation. By mitigation, we meant lessening the effects of climate change. By adaptation, we meant changing in anticipation of climate change.

Mitigation

During our discussion, we came up with some significant reasons for mitigation-based measures. Perhaps the most significant reason for prevention is that we do not know what the long-term effects of climate change will be. Thus, any adaptation attempts may prove to be woefully futile in preventing environmental destruction. For example, we may believe that a policy that encourages moving away from shorelines will provide

safety for humanity, yet rising temperatures may destroy our capability to produce agriculture. Thus, we deal with one effect of climate change, but are doomed to face another that may be much harder to mitigate. On the other hand, a substantial investment into curbing our carbon emissions may mitigate the effects of climate change. With prevention, we no longer have to use models with vast uncertainties to attempt to guess where mitigation will be necessary. Prevention may be more costly upfront, but may lead to long-term vast economic gains when compared to adaptation. If we experience a run-away greenhouse effect, such as when melting glaciers lead to an increase of methane (a greenhouse gas) release, we may have to deal with an increasing rate of needed mitigation for however many years until we can reverse the effect. Such a situation could be catastrophic and is very likely more economically tolling than an upfront investment in cleaner energy. Due to the long-term pay-off of preventative measures, we decided at Pugwash that it

was unlikely that the private sector could be responsible for implementation. On the other hand, one Pugwash member did point out how large companies, such as Google, have an image to present to the public and may make green business moves in order to foster an environmentally conscious reputation. Countering this point, another member mentioned how companies as ubiquitous as Google do not have to foster such a reputation, because their product is so vital we will use it regardless. Preventative measures may be costly, but they will grant our species peace of mind regarding our survival. **Adaptation** Other Pugwash members argued that, when faced with climate change, it might be impossible to pass policies in time to make a difference. There was disagreement on what would be an effective strategy. Some people advocated direct regulation of carbon dioxide emissions. Some argued for less direct intervention in this case. Regulations could prove hard to pass and could lead to energy short-

ages as the market scrambles to find new, effective sources of energy. Even market solutions like carbon taxes would be met with resistance from producers. These policies also don’t cover all that contribute to greenhouse emissions. Expanding these policies to other products would make the political battle even longer. As time goes on, we might reach a point where even a successful series of laws to protect the environment has no real effect. There are more frequent natural disasters in places unable to deal with them now. Members said there needs to be a faster solution. Further, there are more issues than climate change. In the United States specifically, much of the physical infrastructure is outdated and would fail easily. The power grid is a good example. The Federal Energy Regulatory Commission (FERC) reported that only nine substations have to fail to cause a national blackout. Our infrastructure needs rebuilding already, so why not build it resilient to climate change? If the project solves other problems, it will face far less political resistance. In America, the infra-



Eunice Oh/Asst. Art Editor

structure can be made more reliable while also providing a more lasting defense against climate change that could help sooner. Adaptation to climate change can also reach international levels. Regions that contribute little to climate change still suffer its effects. They aren’t culpable for this, and some regions just do not have the assets to rebuild from severe weather. A body like the Army Corps of Engineers could be sent to rebuild, which would diffuse the responsibility for responding to

climate change and improve the lives of millions of people across the world with new infrastructure. In the face of climate change, policy action is required, but preparing for the worst is a much better option than trying and failing to stop it. *Student Pugwash is a non-advocacy, educational organization that discusses the implications of science. This article is a summary of last week’s discussion on our reaction to climate change.*

SCITECH BRIEFS

Chemistry Nobel laureates improve microscopy

Eric Betzig, a physicist at the Howard Hughes Medical Institute’s Janelia Research Campus in Ashburn, Va.; Stefan Hell, a physicist at the Max Planck Institute for Biophysical Chemistry in Göttingen, Germany; and W.E. Moerner, a physical chemist at Stanford University, have been awarded the 2014 Nobel Prize in Chemistry for developing improved microscopy techniques. Due to resolution limits, traditional optical microscopes can only observe objects larger than 200 nanometers. Objects smaller than 200 nanometers, such as cells, can be viewed by electron microscopy, which requires killing the cells. The new fluorescence microscopy developed by the laureates overcomes traditional resolution limits, which allows for observation of small living objects such as cells and bacteria.

Source: Science News



Prosthetic hand improves sense of touch for amputees

Researchers at Case Western Reserve University and the Louis Stokes Cleveland VA Medical Center have developed a prosthetic hand that revives the sense of touch in amputees. The prosthetic uses a computer to send signals to surgically implanted cuffs surrounding major nerve bundles in the arm to stimulate nerves in the arm and brain. These nerves in turn relay the signal to the brain, where they activate the area of the brain associated with the sense of touch. By varying the pattern and intensity of the signals, researchers allow patients to distinguish between different textures and pressures. Patients using the prosthetic also noted a decrease in phantom pain. The research related to this project is published online in the journal *Science Translational Medicine*.

Source: Science Daily



New links found between genetics and coffee

Researchers from the Harvard School of Public Health and Brigham and Women’s Hospital have discovered six new genetic variants that can be associated with regular coffee consumption. Of the six newly identified variants, two are related to caffeine metabolism, two are thought to affect the positive effects of caffeine, and two are related to glucose and lipid metabolism, which were not previously associated with caffeine. The variants provide evidence as to why people respond differently to caffeine, and suggest that people automatically moderate their coffee intake in order to maximize the positive effects dictated by genetic predisposition. The research also suggests that genetic factors associated with increased coffee consumption directly increases caffeine metabolism.

Source: Science Daily



Ocean warming significantly underestimated

Paul J. Durack of Lawrence Livermore National Laboratory, along with a team of researchers, has discovered that previous data regarding the change in ocean temperature is significantly inaccurate. The study concluded that the top 2,200 feet of the ocean has absorbed up to 58 percent more heat from 1970 to the mid-2000s than initially calculated. The researchers concluded that the lack of agreement arose due to inconsistent sampling of water temperatures in the Southern Hemisphere and a general lack of temperature data before 2004, when a worldwide system of autonomous floats was activated. This new data could also impact our knowledge of the rate of sea-level rise data and how sensitive the climate is to the increase of greenhouse gases in the atmosphere.

Source: The New York Times



Dinosaurs coexisted due to different food preferences

David Button, a Ph.D. student in Bristol’s School of Earth Sciences and the Natural History Museum, along with a team of researchers, has discovered that multiple species of dinosaurs were able to coexist due to differences in diet. The research focused on two species of dinosaurs, *Camarsaurus* and *Diplodocus*, which are known to have coexisted. The researchers used CT scans to digitally reconstruct the skulls, jaws, and neck muscles of both species. The research showed that *Camarsaurus* had a strong bite, which allowed it to feed on tough food, and *Diplodocus* had a relatively weak bite, which limited it to soft foods. The study suggests that these dietary restrictions ensured that the species did not compete for resources.

Source: Science Daily



Gut bacteria protein linked to eating disorders

Researchers at Rouen University in Rouen, France have discovered that a protein produced by bacteria in the gut could lead to eating disorders such as anorexia and bulimia. The production of the protein triggers the release of antibodies that bind to both the protein and a hormone that regulates fullness. The research showed that mice with the protein-producing bacteria altered their eating habits, while mice without the bacteria did not. It was also found that patients with anorexia and bulimia had higher levels of the relevant antibody. This discovery has been among the first to associate gut bacteria with eating disorders. The results of this study have been published in *Translational Psychiatry*.

Source: Science News

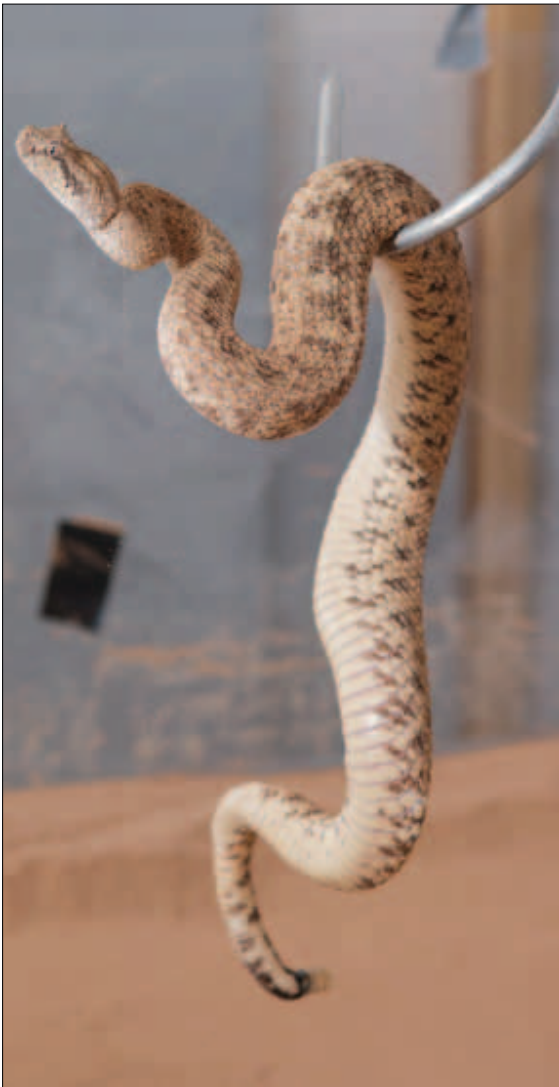
COMPILED BY
Claire Gianakas



CMU researchers combine biology and robotics



Courtesy of Howie Choset
Howie Choset is a robotics professor at Carnegie Mellon.



Courtesy of Rob Felt
The sidewinder rattlesnake has unique locomotion.



Courtesy of Hamid Marvi
Hamid Marvi is a mechanical engineering postdoctoral fellow.

SNAKE, from A5

increase the amount of body area that was in contact with the surface material that it was trying to travel up or across.

Researchers at Zoo Atlanta looked at multiple sidewinders as they moved across an enclosure filled with sand. The sand could be manipulated to form different shapes and angles so that they could test the snakes in different environments. High speed video cameras were also put in the enclosure to observe the motion of the snakes. Hamid Marvi, a postdoctoral fellow

and lecturer in the department of mechanical engineering at Carnegie Mellon, said in a video that the goal of these studies was to “try to transfer what we learn from biology to the robotics world.”

What they discovered was that the sidewinder uses a standard method for climbing sand. The snakes produce two different waves with their bodies that are orthogonal to each other.

Howie Choset, an associate professor at Carnegie Mellon’s Robotics Institute, said in a university press release, the snakes’ motion is “similar to that of a tank” in that parts

of the snake are lifted up from the back while the front of the snake is put into contact with the surface. By controlling the contact surface area between the robot snake and its environment, the researchers were successfully able to make their robots climb up sand. By systematically studying the failures of robotic sidewinding, the researchers found three cases where sidewinding would end in failure. As a result, they can make sure to avoid these scenarios by preemptively adjusting the waves.

In testing the different methods of sidewinding, the

researchers used a modular robot, one that is made up of many parts that transfer energy and information to and from each other.

In this study, the robot had 16 joints, each joint perpendicular to the one before it. Shaped like a snake, it had a diameter of about two inches and a total length of just over three feet.

The joints and long body allowed the snake to successfully simulate a real snake in the various postures that it could take. It could even surpass snakes, taking on postures that a real snake could not be manipulated into. In

addition to this, there are many ways that this robotic snake can exceed the limitations of a real snake. With better artificial intelligence, the snake robots could become search-and-rescue robots, as they could travel through debris from buildings, as well as go to other planets for exploration over sandy or rocky surfaces.

Using this cooperation of robotics and biology, robots can be more versatile in their movements.

If this continues, robots might even be able to do more than snakes can in movements.

Dahl slows cancer spread

CANCER, from A5

cancer evasion.”

Dahl’s discovery has implications for future cancer therapies as well. With the knowledge that stiffened nuclei do not metastasize, mechanical properties of cells can be targeted for cancer cures.

“The pathway of cancer metastasis may be kept in check by mechanical factors in addition to known chemical pathway regulation,” stated the abstract.

This study will also shed light on the process that causes cells to age as people grow older, making this project not only useful for cancer applications, but also for finding cures to problems associated with aging.

Other authors of the publication include Cheng Dong, distinguished professor and department head of biomedical engineering at Pennsylvania State University; Alexandre J.S. Ribeiro, former Carnegie Mellon graduate student in the department of biomedical engineering; Payal Khanna, postdoctoral fellow at the National Institutes of Health; and Aishwarya Sukumar, former Carnegie Mellon master’s student in biomedical engineering.

The discovery that cell mechanics can be manipulated to stop the spread of cancer cells fits into the interdisciplinary paradigm of research at Carnegie Mellon, strengthening the idea that innovation peaks at the intersection of different sciences.

HOW THINGS WORK

Anthropic principle explores the universe’s coincidences



Courtesy of Lauro Roger McAllister via Flickr

SHAOJIE BAI
Junior Staffwriter

Have you ever wondered why the mathematical constant pi is approximately equal to 3.14159? Why the gravitational constant is of the order 10⁻¹¹? Why stardust gathered in such a precise way as to create Earth as a habitable planet? These constants constitute formulas and mathematical equations that dominate our lives: The sun in our sky, the vehicles we use, and even the water that we drink. The coincidental way in which all these values fit together to create a world compatible for sapient life is explored through the concept of the anthropic principle.

Before we delve into the anthropic principle, it is worthwhile to look at some of the coincidences which inspired it. The first is that the electromagnetic force is about 39 orders of magnitude stronger than the gravitational force. Had they been closer in magnitude, the stars would have collapsed long before the existence of life in the universe.


The second coincidence is the temperature of the sun. If the sun happened to be a little hotter or a little cooler, photosynthesis would not be able to occur, putting an end to the natural biochemical processes necessary for life on Earth.

A third coincidence is the value of pi. If pi were larger

or smaller than it is, then all that we perceive as circular, such as orbits, or spherical objects, such as planets, would be completely reshaped. This would, in turn, lead to different planetary motion and life might not have appeared on Earth.


The anthropic principle seeks to summarize what we can learn from these incredible coincidences. In 1973, a meeting was held in Cracow, Poland in commemoration of the 500th anniversary of Copernicus’ birth. It was at this conference that theoretical astrophysicist Brandon Carter first brought up the idea of the anthropic principle. In 1974,

See **PRINCIPLE**, A7



NICKLE-AND-DIME NO-MORE

EXTRAS AREN'T EXTRA



8 PITTSBURGH AREA LOCATIONS

Visit Qdoba.com for a location near you.

'Qdoba', and 'Qdoba Mexican Grill' are registered TM's of the Qdoba Restaurant Corp ©2014.

HOW THINGS WORK

Anthropic principle is where science intersects philosophy

PRINCIPLE, from A6

Carter gave the first official presentation of the principle to the world, hypothesizing that the anthropic coincidences are not purely the result of chance, but are actually built into the structure of the universe that we know.

Carter proposed two versions of the anthropic principle. Carter's weak anthropic principle says that our location in the universe is privileged. In other words, the co-incidental way in which all the parameters of the universe fell into the narrow range which

resulted in life on Earth is purely the result of being in the right place at the right time. This grand coincidence does not necessarily mean that the world was created *for* humans; rather, because our universe happens to be able to sustain human beings, human beings are capable of questioning these coincidences.

On the other hand, Carter's strong anthropic principle is much more theological, and states that the universe was created specifically so that life capable of observation and reflection would one day emerge from it.

Most scientists today believe that the weak anthropic principle is a tautology — that it is always true — because if our location and environment had not been privileged or suitable, humans would not exist to observe it in the first place.

But what also makes the anthropic principle truly valuable is its strong version, which we can interpret in the following way: The universe is compelled, or designed, to have certain properties such that one day conscious life would emerge from it and, consequently, observe this uni-

verse. This implies that there may also be an infinite number of other lifeless universes in which at least one factor or property failed to fall within the specific range required for life. But our universe, just as the strong anthropic principle states, is the one in which the nature gets all its properties correct — and our very existence testifies this argument.

The anthropic principle tells us that everything in this universe was predetermined, because if the values of constants are not set correctly for life (as could be the case in another hypothetical universe),

then no life would emerge to discover these constants. On the contrary, the constants and coincidences known by us are proof that the right combination must eventually occur. Nevertheless, critics to this principle argue that the anthropic principle is a non-scientific concept and that it is instead more of an induction process — something that we assume to be true because of past experiences. Moreover, even the tautology of the weak anthropic principle is questioned, because we have concluded that the anthropic principle is valid by using humans'

axiomatic system, but even this axiomatic logical system is a tool that we developed to understand this universe, which follows from the anthropic principle. This is just like using the outcome of a theorem to prove a theorem, which may be subject to the problem of circular explanation.

This brings us back to our initial position — the unbelievable coincidences.

The physical constants of our universe are balanced in such a way that it seems they have been fine-tuned and carefully made for our existence. Why?

DON'T GET STUCK
BETWEEN A
ROTH AND
A HARD PLACE.


The ins and outs of retirement planning can be puzzling. So at TIAA-CREF, we use personalized advice¹ to help clients reach their long-term goals. We do it in person, online and on the phone. All at no extra charge. See what our professional advice and award-winning performance can do for your financial health. The sooner you act, the better.

Learn more in one click at TIAA.org or call 855 200-7244.




Financial Services

Outcomes
That Matter



LIPPER
FUND AWARDS 2013
UNITED STATES



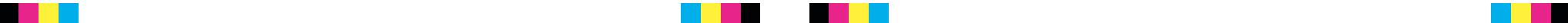
LIPPER
FUND AWARDS 2014
UNITED STATES

BEST OVERALL LARGE FUND COMPANY²

The Lipper Awards are based on a review of 36 companies' 2012 and 48 companies' 2013 risk-adjusted performance.

¹Restrictions apply. Must be enrolled in a TIAA-CREF retirement plan to be eligible. ²The Lipper Award is given to the group with the lowest average decile ranking of three years' Consistent Return for eligible funds over the three-year period ended 11/30/12 and 11/30/13, respectively. TIAA-CREF was ranked against 36 fund companies in 2012 and 48 fund companies in 2013 with at least five equity, five bond, or three mixed-asset portfolios. TIAA-CREF Individual & Institutional Services, LLC, and Teachers Personal Investors Services Inc. C17743A ©2014 Teachers Insurance and Annuity Association of America – College Retirement Equities Fund (TIAA-CREF), 730 Third Avenue, New York, NY, 10017.

Consider investment objectives, risks, charges and expenses carefully before investing. Go to tiaa-cref.org for product and fund prospectuses that contain this and other information. Read carefully before investing. TIAA-CREF funds are subject to market and other risk factors. Past performance does not guarantee future results.



Forum

FROM THE EDITORIAL BOARD



Emily Giedzinski/Staff Artist

Congratulations to SCS on 25 amazing years

As Carnegie Mellon’s School of Computer Science (SCS) celebrates its 25th anniversary this year, The Tartan would like to recognize the school for reaching this milestone in light of its quick rise to a premiere school.

From the first emoticon to the self-driving cars developed by the Robotics Institute, the School of Computer Science has had a major impact in shaping not only the Carnegie Mellon community, but also the world we live in.

A well-deserved brag sheet on the SCS’s 25th anniversary website will tell you that in the 1950s, Allen

Newell and Herb Simon (the professors for whom Newell-Simon Hall is named) were writing artificial intelligence programs before there were computers to run them, substituting index cards for software and graduate students gathered around the kitchen table for hardware.

The combination of imagination and insight they displayed alongside other pioneers of the field they were both teaching and studying at Carnegie Mellon led to the creation of a Ph.D. program for computer science in the 1960s. As both the field and the university grew, the School of Computer Science was officially

opened in Dec. 1988 and in 1989 began providing undergraduate students with a chance to major in computer science.

The School of Computer Science is one of the most notable and prestigious schools at Carnegie Mellon, and its faculty and students play important roles all across campus, including numerous positions at The Tartan. We hope that the entire campus community will take time to appreciate the importance of SCS to the furthering of science and technology in numerous fields, and wish the school many more years of continued success.

CMU impresses with inspiring Cèilidh speakers

As part of the festivities of Cèilidh weekend, Carnegie Mellon University traditionally invites renowned speakers to come and discuss their areas of expertise.

Last Tuesday, Commander of United States Central Command General Lloyd Austin III spoke on Central Command’s significance in national defense. Central Command includes the Middle East and Central Asia, stretching from Kazakhstan to Egypt, including Iran, Saudi Arabia, and Pakistan.

On Friday, former Supreme Court Justice David Souter spoke on the importance of the humanities for a healthy nation. Carnegie Mellon tends to focus closely on science and technology, given the strength of those programs, but these excellent speakers showcase that the university also values its commitment to the

humanities.

General Austin oversees all of the United States operations in the Middle East and Central Asia. General Austin’s talk focused on recent policies in that region, most notably the aftermath of the American invasion of Iraq and the security situation in Afghanistan.

He also spoke on United States’ relationships with our various allies in the region, and the complex interlocking web of different alliances, religious affiliations, and ethnic conflicts that contribute to the state of the region today. Meanwhile, Justice Souter spoke on the importance of humanities for building a stable nation.

Both General Austin and former Justice Souter are more than experts in their respective fields; they both play, or have played, an essential role

in the governance of our nation. The decisions these two have made over their careers have certainly affected the lives of many people in a myriad of ways.

While theoretical speakers are always interesting, people who had such direct and concrete impacts on the world make for fascinating lecturers.

As a school dedicated to the emergence of new technologies, it is also important to remember the policies and controversies that impact our social and political rights, as well as the impact that our nation has in relation to the rest of the world.

These speakers served as a resounding reminder of these various influences upon our lives and the necessity of having strong leaders to continue formulating the policies that will further change our lives.

Pittsburgh restaurant grades promote health

Allegheny County’s Health Department is developing and considering implementing A-B-C restaurant grades for health inspections. A pilot program for this system was implemented over the summer and opened for public comment. If this program were adopted, Pittsburgh would join cities such as New York and Los Angeles in providing a clearer indication for consumers as to the cleanliness of the restaurants they dine at.

The current form of this proposal would have health inspectors grade restaurants out of a score of 100, with deductions being made for violations. The letter grades would be assigned on a standard academic scale, where a 90 and above would

be an A, an 80 and above would be awarded a B, and so on. Any grade below a C would be subject to Health Department enforcement actions.

If an inspected restaurant is not awarded an A during their first inspection, the grade will not be posted on the front of the restaurant’s facility, but will be available online. A re-inspection will then be scheduled, after which the second awarded grade will be posted on the restaurant’s exterior.

The awarding of letter grades would provide an incentive for restaurants to improve their cleanliness. Before, a restaurant would only need to pass a health inspection to stay open for business. However, with customers likely being deterred

from eating somewhere with a lower letter grade, there is the added incentive for additional improvements to the condition and sanitation of eating establishments.

While the owners of some restaurants are objecting to the proposal, the benefits to consumers and the public through decreased instances of food illness would very much outweigh any additional costs borne by the restaurant owners.

Last week, the legislation was referred to committee within the Pittsburgh city government, and it looks as if it will pass. This measure will go a long way toward protecting public health and ensuring that consumers are being served food in a clean environment.

AP students deserve to know unbiased history

KAYLA LEE
Junior Staffwriter

During the past two weeks, hundreds of Colorado high school students have walked out of class to protest proposed changes to the Advanced Placement (AP) United States History Exam. Four high schools even closed for a day when teachers organized a “sick out,” claiming that the school board is not listening to them on a range of issues, including the AP curriculum.

The protests were in response to a resolution by Jefferson County school board member Julie Williams. The resolution stated that AP United States History classes should promote “patriotism and ... the benefits of the free-enterprise system” and should not “encourage or condone civil disorder.” As soon as she heard that conservatives were upset, Williams proposed a committee to review the district’s courses. According to Williams, the committee will work to improve the AP United States History curriculum. In an interview with the local Fox News affiliate, Williams stated that her resolution was to teach history without bias.

Jefferson County is Colorado’s second-largest school district, with a conservative majority of elected members in the school board. Williams’ proposal caused a spark of protest from board members. Conservative board members claim that the new curriculum undervalues concepts such as “American Exceptionalism.” Protests began with 100

students, who claim that they do not want their history censored.

The issues around what education should and should not have been brought up. Many educators would agree that classrooms should promote critical thinking and teach students based on the facts. The educational environment should be a place where students and teachers can share ideas and build on them using knowledge acquired. The more students know, the more evidence they can draw from when engaging in academic discussion.

Additionally, it is important to consider the purpose of the AP exams. Most students take the AP exams in order to send the scores to colleges for credit. Receiving college credit for high school education is important. The AP score is supposed to reflect a level of critical thinking that is expected at the college level. This kind of critical thinking can only take place when the student has the necessary information.

Especially in the case of history courses, students have the right to be educated in an unbiased environment. Yes, cultural bias in teaching is unavoidable and every teacher holds their own beliefs. However, when changing the curriculum of an AP course, one should consider the fact that any change should help students develop critical thinking skills by applying acquired knowledge. This knowledge should be provided without censorship, because students have the right to know the complete history, and not just snippets of it.

Ebola is not an isolated issue, but international



JUSTIN YAN

Although Ebola has raged through news snippets since March, the American general public has only started paying attention to the disease and its effects on both African and domestic affairs since the disease travelled across the Atlantic Ocean.

This attention can be seen through Google Trends; a huge spike in interest occurred when Eric Duncan, a Liberian national who died on Oct. 8 on United States soil, was diagnosed with Ebola and admitted into an isolation ward in Dallas, Texas.

What does this show about the United States and our attitude in general? While some news outlets have labeled the intermittent attention of the American public xenophobic and racist, I think it is natural that people tend to focus on news that concerns themselves — news that has a direct impact on American lives. From this standpoint, Ebola reaching American soil should rightfully cause a dramatic increase in coverage of the diagnosis and treatment of Americans with the disease.

What many of us fail to realize is that when Ebola was only starting to rage through Western Africa, it did have an impact on our world. Ebola is one of the deadliest viruses ever seen, and the sheer horror and pain of being diagnosed with the disease only adds to the mystique around

it. A large-scale pandemic would be disastrous for people’s livelihoods, existing healthcare infrastructure, and the world economy. Considering this effect on the U.S., the media’s portrayal of the disease has been almost catastrophic. We can’t label Ebola a “Third-World” disease, when even so-called “First-World” medicine can’t completely cure it. Have we ever asked ourselves what it would be like to live in Liberia or Sierra Leone, where medical facilities are understaffed with limited resources?

It is imperative to note that United States healthcare infrastructure is one of the few crucial advantages we have over West African nations in managing an Ebola outbreak. American medical aid in Africa would have benefitted both the United States and the international community in addition to the nations themselves.

The government response was centered on securing Americans, while very little aid flew the other way. Media portrayal of Ebola has focused on how the weight of the blame swings between natural circumstances and the lack of trained medical professionals.

The solution to the Ebola crisis will require a systematic reshuffling of healthcare in the afflicted nations, and this is where the United Nations needs to go from bystander to active executive. Ebola is no longer an isolated problem in Western Africa; it may very soon dictate the fate of the international community.

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

Editorial Board

RACHEL COHEN *
Publisher
BRADEN KELNER *
Editor-in-Chief

ARIEL HOFFMAIER
Forum Editor
KATE GROSCHNER *
Contributing Editor

CHLOE THOMPSON
Staffwriter
BRENT HEARD *
Contributing Editor

JUSTIN MCGOWN
Staffwriter

Editorial Staff

LAURA SCHERB *
Operations Manager
BRIAN TRIMBOLI
News Editor
BROOKE KUEI
SciTech Editor
JOEY PEISER
Pillbox Editor
ZEKE ROSENBURG
Sports Editor
MARYANN LANDLORD
Comics Editor

JONATHAN LEUNG
Photo Editor
MICHELLE WAN
Art Editor
MARTHA PATERSON
Online Editor
MAIRÉAD PETTIT
Personnel Manager
ANNE-SOPHIE KIM
Layout Manager
WILL CRICHTON
Systems Manager

JOHN HUO
Advertising Manager
DESIREE XU
Business Manager
JAMES WU
Copy Manager
NIVEDITA CHOPRA
Asst. Copy Manager
EVAN KAHN
Asst. Copy Manager
ROBERT MARATOS
Asst. Systems Manager

BENJAMIN CHANG
Asst. Business Manager
ROHAN VARMA
Asst. SciTech Editor
XIYU WANG
Asst. Forum Editor
JENNA BODNAR
Asst. Pillbox Editor
EUNICE OH
Asst. Art Editor

SENIOR STAFF
Carl Glazer, Greg Hanneman, Alan Vangpat

COPY
Lula Beresford-Banker, Francesca Begos, Christopher Benson, Amelia Britton, Gordon Estes, Rin Fair, Stephanie Stern, Emily Giedzinski, Stephen Stern, Emily Tsui, Diana Zhou

LAYOUT
Isabel Bleimeister, Yong Gun Choe, Michael Das, Rin Fair, Aishwarya Guda, Seungmin Ha, Korrawat Jianthanakanon, Rissa Lee, Udaya Malik, Evelyn Pandos, Ian Tanaya, Abhy Vytheswaran

ADVERTISING
Alison Chiu, Anuva Kulkarni

© 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 individual creators. The Tartan Editorial Staff reserves the right to withhold from publication any copy it deems unfit.

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

Office: University Center 314
Web: www.thetartan.org
E-mail: contact@thetartan.org

Mail:
The Tartan
Box 119, UC Suite 103
5000 Forbes Avenue
Pittsburgh, PA 15213

Jong-un disappears, media speculate



Allison Chiu/Staff Artist

RUSSELL HOLBERT
Junior Staffwriter

Online news media has sent out an unofficial missing persons report for the North Korean Supreme Leader Kim Jong-un. Now, in true North Korean fashion, the government has no comment on the matter.

During the dictator’s absence, every news source has made its own speculations, ranging from a military coup to severe caviar-induced gout. Any person with an Internet connection has been able to witness the inflammatory nature of digital

journalism.

Last Friday, the North Korean Workers’ Party celebrated its 69th anniversary, with the country’s third-generation leader nowhere to be seen. His absence at the ruling party’s festivities, acknowledged only by the presentation of flowers in his name, further piqued the interest of writers following the retreat from the public Jong-un began on Sept. 3.

In the absence of facts and answers, news sources have begun assuming the nature of the 31-year-old ruler’s disappearance: fleeing a military coup, injuries from a military

drill, severe gout, and so on. The most interesting and obscene part of the media’s coverage of this international mystery is the invalidity of its projections. There is no proof to the speculations that any one paper, website, or other medium is claiming beyond anonymous tips, “U.S. Intelligence,” or pure speculation. Even when, and if, the stout Premier returns from his mysterious escapade, there is no guarantee that anyone — in or out of North Korea — will ever know what transpired in the 40-plus days that he has been internationally unaccounted for.

On the same Friday honoring the two previous North Korean leaders, father and grandfather to the current, the festivities lost focus as machine gun fire volleyed across the boundary to South Korea, in reaction to anti-communist literature being air-ballooned North across the border. This mild, casualty-free skirmish might normally go unnoticed by the Buzzfeed-style articles that populate the top section of any Google search. However, the less the news knows, the more they have to report.

The unraveling story of Kim Jong-un is a prime example of the unprecedented swelling nature of current news coverage. This is the prevalence of stories and articles that fill in blanks and missing facts with uninformed speculation. Jong-un is gone, no one knows why, and no one knows where he is. Should he return, there will still be speculation as the North Korean government continues to release nothing. News media will continue to be relentless in building the stories they want from empty space.

Obama’s inaction leads to worse oil alternative



KYLE HENSON

This past week, plans were announced to build an oil pipeline of massive scale that would connect Alberta’s energy-rich oil sands to the Canadian Atlantic coast just northeast of Maine. This pipeline is in response to a frustrating lack of a decision from President Obama regarding the proposed Keystone XL pipeline that would take the same oil through the United States to Louisiana and Kentucky refineries. The new pipeline, called Energy East, is more than twice as long as Keystone, carries a third more oil, and is a great example of how the desires of the market always come to fruition, regardless of legal impediments.

Obama hasn’t made a decision on Keystone because he’s been battling environmental criticisms from the left, while also facing flak from the right about letting those concerns prevent Keystone’s construction and all the jobs that it would create. Additionally, Keystone supporters tout that having a consistent source of energy from our friendly northern neighbor would reduce America’s energy dependence on the increasingly unstable Middle East. As a result of these competing concerns, Obama has deferred making a decision on Keystone for six years while oil demand, especially from the emerging markets of India and China, continues to skyrocket.

Oil companies aren’t going to forgo a significant market opportunity because of political challenges and, as a result, we now have Energy East, which is worse for the environment and creates a number of Canadian jobs, but no American jobs. In essence, Obama’s indecision has created a situation that is, by all measures, much worse than if Keystone XL was approved.

This type of situation is inevitable if politicians attempt to thwart significant market demand. Another example is the current state of the drug market in the United States. Because drugs are illegal, drug users are pushed into increasingly dangerous situations. Often, they don’t get

the drugs they want and experience adverse effects. Cartels in Mexico have created significant challenges for the Mexican government and raised a multitude of humanitarian issues for the United States with the recent immigration crisis. If drugs were legal, these problems would disappear.

Another well-publicized example happened in Ireland, when the Irish government attempted to reduce the amount of trash that Irish citizens generated by making people pay a tax on collection of more than two bags of trash. Instead of curbing their consumption, the Irish simply started burning their trash, which was worse for the environment and led to a lot of fire-related deaths and accidents. The environment was worse off, and Irish hospitals were overwhelmed with burn victims, which increased healthcare costs, and diverted medical resources away from people with other problems.

Instead of trying to alter the most convenient way for market demand to be met, countries looking to generate positive outcomes from this market demand should seek to work within the system, rather than thwart it altogether. If drugs were legal but heavily regulated, not only could drug users get safe drugs, but organizations like Narcotics Anonymous could find a way to reach drug users and guide them out of addiction. Instead of penalizing trash creation, rewarding recycling has been much more fruitful for countries looking to promote sustainability.

With this oil pipeline, a similar tactic should be implemented. Oil is already very heavily regulated and taxed. Maybe Keystone XL should be approved, but an additional tax could be levied on the associated oil refineries and the money could be used to purchase carbon offsets to assuage environmental concerns. That’s just one idea, and it’s definitely not perfect, but that outcome would be far more desirable to all parties than the Energy East solution. The road to hell is paved with good intentions, so it’s better to work within the system than against it.

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

Law must enforce “Yes means yes”



XIYU WANG

At the end of September, California passed a wave of new bills that included SB 967, more commonly known as the affirmative consent law. The bill shows that California is responding to a need for laws that protect its citizens against sexual assault. However, the bill does not address the immediate reasons behind why sexual assault cases have become such a problem.

California’s new law requires that universities use affirmative consent — or “yes means yes” — as the definition of consent and provide training programs to their students, which will get people talking about consent and hopefully change the culture surrounding rape. However, the bill leaves huge gaps in terms of actually deterring and prosecuting sexual assault.

In most sexual assault cases, it is not a lack of a clear-cut definition of consent that is the major problem, but rather the lack of a proper response when such cases are reported. In Catholic Church sex abuse scandals, for example, there is no question that children abused by priests were unable to consent. The major problem is that the church failed to investigate the claims properly and punish the offenders. The

perpetrators don’t care about their victims’ consent, especially when their victims are powerless to seek justice against them.

There will always be some difficulty in enforcing laws against sex crimes because the acts are almost always done in privacy and it is difficult to tell if someone has been sexually assaulted from physical evidence. As a result, scandals involving sexual assault or abuse share two main characteristics: one, victims are often reluctant to report the crime; two, even when it is reported, the investigation can be inadequate, opaque, or too time-intensive and emotionally draining for the victim to follow through on the proceedings.

In the latter case, victims don’t report because they fear exposing such vulnerable moments of their private life to other people, as well as backlash from members of their community. In the former, there are a number of well-publicized stories of schools mishandling sexual assault cases. In some cases, administrators dismiss cases outright. In other cases, they either do not adequately punish the perpetrator or provide no protections to the victim against further actions by the perpetrator.

Regarding enforcement, the bill does state that each university should have a policy regarding investigations, but it does not specify exactly what policy universities should have. Without specific guidelines on reporting and enforcement, the bill

does nothing to protect a victim’s privacy or ensure a fair investigation. Some specific policies to consider are: independent and anonymous panels to review cases, laws protecting the privacy rights of victims who report sexual assault, and proper documentation of the proceedings to which the victim has access so the victim has legal recourse if the school mishandles their case.

Furthermore, the bill offers no clear guidelines as to how to resolve cases in which there is no evidence other than the testimonies of the victim and perpetrator, or if both parties have been drinking and one later reports the other. These difficult cases, along with other important policies on enforcement, would presumably be left up to the schools to decide, which is hardly any different from the status quo.

With all these ambiguities in the bill, at best it can be a state-sponsored awareness campaign. With specific guidelines on enforcement, not only would California better protect its college students in cases of sexual assault, but it could also be a model on which other institutions can base their procedures for handling sexual assault. Consent should only be the starting point for which any sexual assault policy is based on; hopefully California will follow up on SB 967 with laws more focused on enforcement.

Xiyu Wang (xiyuw@) is a staffwriter for The Tartan.



Courtesy of Ekabhishek via Wikimedia Commons

A PERSON’S OPINION

Compiled by Justin McGown

The Tartan spotted a lot of strange and unfamiliar adults on campus this week. So we asked,

How did your parents spend Cèilidh weekend?



Lina Sherenet
Statistics, Public Policy & Management
Sophomore

“My parents have more of a social life than I do — they had a party this weekend.”



Arnav Tayal
Business Administration
First-year

“My parents are in India.”



Machika Kaku
Biology
Sophomore

“My parents are at Chipotle with-out me.”



LeShaun Jones
Statistics, Psychology
Sophomore

“My parents are busy unpacking their new house!”



Noah Fatsi
Statistics
Junior

“My parents had a wedding to go to this week.”



Did you get a 31 or better on the ACT?

Did you get a 700 or better on the Math Portion of the SAT?

**Are you interested in the trading industry
and have programming experience?**

If so, XR Trading may have a Trader
position for you!

**Are you fast at programming, with
experience in C++, Matlab or R?**

If so, XR Trading may have a
Software Engineer position for you!

XR Trading is a proprietary trading firm located in the heart of Chicago’s financial district. We design and build cutting-edge technology and serve as a leader in the global derivatives marketplace. We employ a team-based approach and leverage our technology and core competencies across a wide array of asset classes.

XR Trading is currently hiring
Traders and Software Engineers



XRTRADING.COM

Competitive Compensation

- Base salary starting at **\$80,000**
- Discretionary **bonus starting at 0-\$30,000**

Benefits Provided

- 100% employer-paid medical coverage through Blue Cross Blue Shield-XR pays 100% of deductible
- Comprehensive dental and vision coverage–XR pays 100% of premium
- 15 vacation days + 11 holidays
- Matching 401(K)



The newest member of CMU water polo: the coach

DESIREE XU
Business Manager

September marked a new season for all Carnegie Mellon student athletes. It also marked the beginning of the tenure of the new women’s water polo coach, Mark Rauterkus.

It all began one day in August. Sophomore chemical engineering and biomedical engineering double major Maya Holay, captain of the team, and teammate, sophomore design major Jillian Nelson were enjoying an informal pickup game at the Citiparks Ammon Pool in the Hill District when they met Rauterkus, who organized the game.

When the two athletes suggested a possible opportunity for Rauterkus to be involved in college athletics, he accepted the then-vacant coaching role.

Rauterkus is a swimming and water polo veteran, and has coached the former at various high schools since 1976.

In the past, he has cumulatively coached eight college seasons, two of which were dedicated to water polo, at schools like Ohio University, Baylor University, Bradley University, and Chatham University.

In addition to university coaching, he has led water

polo camps for five years during summers, as well as in other settings.

The women of the water polo team here at Carnegie Mellon are a completely different story.

“The kids have been great and are heavily self-motivated. Maya runs every practice before I arrive, which to me is welcoming to an outside voice, like me,” the coach said.

With the help of the team members’ go-getter attitude in and out of the pool, Rauterkus said he plans to put his best

foot forward in promoting the team’s success.

Since the team is still a recreational intramural organization made of a blend of beginners and veterans, Rauterkus said there is a need to have organized, structured practices where skills can be taught through peer-to-peer demonstrations.

He uses practices to tactically choose who starts games, as well as match team members with approximate skill levels for exercises to improve team dynamics.

He also seeks to implement effective strategy that is not limited to game play, but extends to building relationships regionally and nationally.

He plans to build up the team’s reputation through active recruitment of student players as well as assistance to other universities that are attempting to establish themselves in water polo.

Rauterkus predicts that this will promote camaraderie and support on both sides, and increase Carnegie Mellon’s chances of hosting successful

home events in the future.

However, the coach agreed that the most challenging aspect of his job is encouraging student athletes to practice regularly despite their rigorous curriculum.

“As a coach, my job is to be supportive of the athletes’

enjoyment and success in the sport as well as all other aspects of their life.” said Rauterkus.

Since the installment of the new coach, the women’s water polo team is venturing down the path to becoming a competitive team.



Coach Mark Rauterkus (far left) discusses game strategies that could be practiced with the players.



Coach Rauterkus (left) with team captain Maya Holay (right).

SPORTS BRIEFS

Football

On Saturday, the Carnegie Mellon Football team played at Bethany College.

Junior quarterback Andrew Hearon ran for a touchdown before The Tartans faltered. The defense let up 19 straight points, and the offense averaged less than 3.5 yards a play and turned the ball over twice for the game. The team fell 19–7.

The Tartans next play at

home against Grove City College on Saturday.

Volleyball

The Carnegie Mellon volleyball team competed in the Ithaca Tournament this weekend, sweeping their matches.

In the game against King’s College, the Tartans won 25–11, 25–12 and 25–9. First-year outside hitter Heather Holton had 10 kills, and sophomore defensive specialist Molly

Higgins had 11 digs.

Against Ithaca College, the Tartans won 25–15, 25–22, 25–22. Sophomore setter Emily Newton had 22 assists, Holton had 14 kills, and Higgins had 10 digs.

Saturday, they beat Utica College, 25–17, 25–18, 25–16 and Wells College, 25–13, 25–18, 25–19. Sophomore middle blocker Jackie Gibbons had 11 and 8 kills against Utica and Wells, respectively, while Hig-

gins had 18 digs against Utica and first-year middle blocker Eliza Donohue had 8 blocks against Wells.

The Tartans next play Wednesday at home against Franciscan University of Steubenville.

Cross-country

The men’s and women’s cross-country teams hosted the annual Carnegie Mellon Invitational on Saturday.

The men’s team finished first overall with a top five combined time of 2:09:19.6. Senior George Degen finished third overall in 25:23.00. The next four Tartans, juniors Brian Bollens and Marc-Daniel Julien, along with sophomore Ryan Archer and senior Josh Antonson, finished in 8–11th places.

The women’s team had a top-three finisher in junior Liz Snyder who finished second

overall with a time of 18:32.5. Overall, Carnegie Mellon as a team placed fourth overall with a total time of 1:36:35.3, and had a second top-ten finisher in senior Erin Kiekhaefer, who finished in 19:06.1, for seventh overall.

Both teams next run at the Inter-Regional Rumble at Oberlin College.

Compiled by
CARL GLAZER



TRUE RUNNER

MORE THAN JUST A RUNNING STORE

RECEIVE 10% OFF WITH YOUR VALID STUDENT ID*

TRUE RUNNER
5407 WALNUT ST
PITTSBURGH, PA 15232
WWW.TRUERUNNER.COM

 truerunnershop

 @truerunnershop

*Exclusions Apply. See store for details.

Sports

Carnegie Mellon club baseball nears end of fall season

BRADEN KELNER
Editor-In-Chief

As the Carnegie Mellon club baseball team’s fall season comes to a close at the end of the month, the team sits just over .500 with five wins and four losses.

Being a club team at the university, the team is not considered as competitive as the Division III sports on campus, but that doesn’t mean the student athletes who play aren’t serious about the sport.

The team, competing in the National Club Baseball Association (NCBA) league, started their season on Sept. 7 with a win against the Community College of Allegheny County South, and two more wins on Sept. 13 against the Boyce campus.

The following week, the team fell to the community college’s Boyce campus team in two close games, 8–6 and 7–5, respectively. The team suffered one more loss to Westminster College on Sept. 28 before overcoming Duquesne University with two wins and one loss in a three-game series on Oct. 4–5. The team’s biggest competitors are Robert Morris University, Saint Francis University, Duquesne, and the California University of Pennsylvania, as well as West Virginia University (WVU), which the team is scheduled to play on Oct. 25–26.

In addition to competing in the fall season, the team competes in the spring, play-

ing a total of about 30 games over both seasons. The team traditionally travels to Florida at the start of spring break to take part in NCBA Spring Training, where they compete against teams outside of their main competitors’ pool.

“I came into school knowing I was going to play,” said senior pitcher, shortstop, and team president Darryl Tan. “I’ve been playing baseball my whole life, so joining the team was a no-brainer for me. It was a good way to meet people, sharing the passion I have for baseball with other people.”

Tan said that, while many players have joined the team with travel or high school experience, many have not had prior experience.

This year, the team lost five outgoing senior starters, but gained six first-year students. “The freshmen really stepped up. We got a good recruiting class,” Tan said of the incoming students.

Darren Kerfoot, junior pitcher, shortstop and team captain, said he joined the team his first-year at the university and made it known that he wanted to lead the team. “I wanted to express to the rest of the team how baseball should be played,” Kerfoot said.

He became the captain his sophomore year. During the fall 2013 season, the team swept WVU, which, according to Kerfoot, has not happened for several years. “I think this upcoming year, we’re going to be just fine,” Kerfoot said of

this year’s rematch.

Tan said that, as the team moves forward, “We’re being more aggressive with our bats, taking more swings rather than taking walks, and getting quality swings in.” Tan said that, defensively, the team is hoping to limit physical errors and stay with tough hops.

“Our main goal is winning the conference and then really competing in the post-season, trying to get to ... the national championship,” said Kerfoot. “A good mental goal is to just be focused and play hard in every game — every practice — every time you have the opportunity to.”

Tan, a senior psychology and biological sciences major, said of balancing academics with playing on the team, “We always tell people that academics come first ... but at the same time, we have to be committed to the team and come to practice ... but if you have office hours or extra help during practice time, we always tell you just come ... get your swings in, get your work in before you go back to work which is always the main thing we want. You are here for academics.”

The team’s talents extend beyond baseball. The student athletes are currently the university’s reigning intramural dodgeball champions, and have played intramural softball in the past as well, according to Tan, who said that the team is also considering playing intramural basketball this year.



Courtesy of Darryl Tan

Top: Sophomore shortstop Rainer Nunez awaits a pitch from Robert Morris University. **Bottom:** The Carnegie Mellon baseball team plays at the spring training event in Florida.

Heather Holton impresses in first season at university



Courtesy of Carnegie Mellon Athletics

Heather Holton, first-year outside hitter, is among the team leaders in kills.

ZEKE ROSENBERG
Sports Editor

A first-year outside hitter and undeclared Dietrich College student, Heather Holton has already established herself as a threat on the volleyball court.

By just her fifth week with the Carnegie Mellon volleyball team, she has already brought home honors as the Eastern Collegiate Athletic Conference (ECAC) South Rookie of the Week.

She did not stop there, however. After her stellar play in a 3–0 sweep of the 20th ranked DePauw University at the end of September, she took home the University Athletic Association (UAA) Athlete of the Week title, UAA’s highest weekly award.

“I did not expect to get recognized so soon,” Holton said, but her play spoke for itself.

Holton’s competitive nature and composure help her more than anything on the court.

“[Volleyball] is based [on] mentality,” she said. “We try to get in people’s heads and talk across the net.”

Holton said that she brings

a cool head to the floor, which allows her mind to stay in the game, even as others get rattled by noise coming from Carnegie Mellon’s side of the court.

Her focus is apparent in her play as well, for she consistently is among the team leaders in kills, which lights up the scoreboard for a very successful Carnegie Mellon team.

Not all of those kills come from mindset, though. Holton has honed her skills through her favorite drill, Vegas, in which a player receives a series of “free balls,” that they attempt to hit for points.

If she scores the majority of the free balls, she receives a money ball for all or nothing. The practice has paid off, and not just for Holton.

Carnegie Mellon upset Mount Washington, ranked at the time fifth in NCAA Division III, in mid-September.

Carnegie Mellon won the first and fourth sets by tight 25–23 scores, handing Mount Washington their first loss of the year. Holton cited this win as her proudest moment in her short time with the team.

“It showed our potential,”

she said. Carnegie Mellon’s 15–4 record to this point indicates that she was right.

Holton has spent six years playing volleyball, and her dedication to the sport is apparent.

She said she appreciates its impact on her life despite her demanding schedule, and welcomes the challenge to stay organized and committed, balancing her life as a student with her life as an athlete despite the massive time commitments to both.

She is a competitive person who likes to be active, and volleyball appeals to both these interests.

Holton also is grateful for the friends and support volleyball provides, including senior right side hitter Ali Celentano, who she refers to as a mentor.

“We’ll compete with each other,” she said. “Sometimes, after a match, I’ll tell her ‘I had more kills than you’ or she’ll say ‘I had more kills than you.’”

For Holton, volleyball is about the team more than anything. “Mostly,” she said, “I’m proud to represent Carnegie Mellon volleyball.”

CMU soccer splits matches

CARL GLAZER
Staffwriter

The Carnegie Mellon men’s and women’s soccer teams hosted Washington University in St. Louis on Saturday, as they each continued University Athletic Association (UAA) play.

The men started out strong, fighting to rebound following their scoreless tie last week. After a quick initial shot on goal, the Tartans kept Washington away from the net while peppering the goal with five shots of their own in the first half, but nothing saw the back of the net.

The lack of scoring did not equate to a lack of excitement; three yellow cards were awarded in the first half alone, two of them to Tartans, before two more cards were split between the two teams in the second half.

Coming out of half time at a 0–0 stand still, both teams played aggressively, racking up a combined 19 fouls in the half (10 for Carnegie Mellon).

Unfortunately, even with the added aggression, neither team was able to find the net, causing the Tartans to go

into overtime for the second straight game.

In the 95th minute, it looked like the scoring drought might finally end when Washington was granted a penalty kick, but senior goalkeeper Jacob Rice had other ideas as he made the key save that ultimately set up the Tartan win.

In the second and final overtime period, it looked like the game was going for another tie until the 108th minute when junior midfielder Connor Webb earned a penalty kick, and a chance to end the game.

Unlike Washington, Webb was able to take advantage of his opportunity and knocked the ball into the back of the net, pushing the Tartans to 1–0–1 in UAA play and 7–3–1 overall.

In the second game of the afternoon, the fourth-ranked women’s team took on Washington’s second-ranked team in the battle of UAA heavyweights.

The first half ended in the same 0–0 tie as the men’s match, but instead of great goalkeeping and missed opportunities, this time it was

a story of defense, as neither team allowed a single shot. The ball barely even got into either team’s defensive zone without quickly being cleared. The Tartans received only two corner kicks, and did not give up any.

In the second half, each team started playing a bit looser and pushed harder as they tried to break the tie.

Washington finally got the first shot of the game in the 51st minute, followed quickly by the first Carnegie Mellon shot in the 58th minute when sophomore forward Megan Bartoshuk’s hard shot was turned away by the Washington goalkeeper.

The first and only goal of the game finally came in the 62nd minute when Washington scored off of a rebound given up after sophomore goalkeeper Katie Liston first saved a free kick.

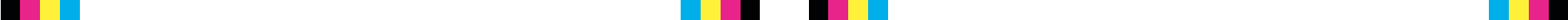
The Tartans tried furiously to come back to avoid their first loss of the season, but it was to no avail as the stifling Washington defense returned.

Both teams travel to Brandeis University on Friday to continue UAA play.



File photo by Kevin Zheng/Staff Photographer

Junior forward Ben Alderoty positions himself to gain possession of the ball.



Memphis Hill

The rock band releases their debut album, *Backwards Beginnings*. • B8

Frame Gallery

I <comma> Sincere Animal opens • B5

Glass Menagerie

The Pittsburgh Public Theater presents the Tennessee Williams classic. • B6

10.13.14 Volume 109, Issue 8

...this week only



3 *Spanish Strings*

The Pittsburgh Symphony Orchestra plays a special concert featuring Spanish guitar.

4 *Miller Gallery*

Neurons and Other Memories, a new exhibition of student work, premieres at Miller Gallery.

5 *The Frame*

I <comma> Sincere Animal, a new exhibition of student work, premieres at the Frame Gallery.

6 *Glass Menagerie*

The Pittsburgh Public Theater presents their fall production of the Tennessee Williams classic.

7 *Freak Show*

The fourth season of *American Horror Story* gets off to a strong start.

8 *Memphis Hill*

A rock band comprised of many Carnegie Mellon students releases its debut album.

10 *STS9*

The popular jamtronica band plays an electrifying set at Stage AE.



regulars...

3 *Advice*

Everything you need to know about the mysterious Gates helix and how to escape.

15 *Calendar*

Midsemester break is upon us, so gather round and share the tale of this week's events!

...diversions

11 *Comics*

Need one more laugh before break? Check out the comics.

13 *Puzzles*

Don't let your brain fall asleep over break. Work these puzzles to stay sharp!

14 *Horoscopes*

The stars have predictions for your long weekend.

PUBLISHER Rachel Cohen **EDITOR-IN-CHIEF** Braden Kelner
PILLBOX EDITOR Joey Peiser **ASSISTANT PILLBOX EDITOR** Jenna Bodnar **COMICS EDITOR** Maryyann Landlord
ART EDITOR Michelle Wan **PHOTO EDITOR** Jonathan Leung
COPY MANAGER James Wu **COVER** Courtesy of Memphis Hill

PSO has hot Spanish date

Guest guitarist Pablo Villegas brings a charming confidence

Confession time: I am no music critic. Like most people, I listen to music, but I would not consider myself to have “refined taste.” So let this serve as a disclaimer. I am a classical music fan, not an expert. This means I may use amateur language that might make music majors cringe. I am a real person reviewing real music — that’s all.

Last weekend, the Pittsburgh Symphony Orchestra (PSO) performed a set of three pieces with special guest guitarist Pablo Villegas. The evening was titled *Spanish Strings* and was conducted by Omer Meir Wellber.

The first piece was Claude Debussy’s *Petite Suite*. This piece swirled and swayed for the majority of its length, but concluded with a “IV Ballet” that refused to be forgotten. The cheerful and joy-inducing melody of Debussy’s “IV Ballet” captured the audience with its catchy tune. This piece was a good lead-in to the more specialized taste of the second piece of the evening.

The second piece of the night welcomed Villegas to assist with Joaquin Rodrigo’s *Concierto de Aranjuez*. The first section was to basically establish how fantastic Villegas is as a guitar player. His fingers appeared electrified as they meticulously slid up and down the guitar neck in a basic interaction with the orchestra.

It was in the “II. Adagio” that the ugly disparity of the sound between the soulfully played guitar and strictly trained orchestral instruments unfolded. There was an uncomfortable mix of sound when it came to the universally recognized classical sound and the culturally specific Spanish-sounding guitar.

However, it was in an encore performance that Villegas really displayed his talent. He exuded a certain confidence as he strummed along to an Argentine song without accompaniment of the PSO, which resulted in multiple standing ovations.

Despite all the wonderful music playing, it was clear that the centerpiece of the concert was really the conductor, Wellber. The Israeli’s apparent enthusiasm for the music is rivaled by few other modern conductors. During the third and final piece of the night, Piotr Ilyich Tchaikovsky’s *Manfred Symphony, Opus 58*, Wellber contorted and moved with the music as it flowed from loud to soft, to loud again and back to soft. You could hear the excitement in his breath as he deeply inhaled with anticipation of the fortissimo that was to come in between each silence. Wellber exerts himself so much that if one were to take away the symphony, he would look absolutely deranged.

But at his core, it is plain to see that Wellber, simply put, just really loves music. It takes over his entire body (he has the physical musicality present in Disney’s *Fantasia 2000*). His dedication to music is obvious and made me realize that symphonies surround us. Of course, there are the ones that are composed by Bach and Mozart and Liszt, but there are symphonies during intermissions where it is mostly a composition of voices, as well as the symphonies of honking cars and noisy buses outside on the street. It is clear to see that Wellber lives in the music and that his attitude is infectious to anyone in the audience.

Meredith Newman | Staffwriter



Courtesy of the PSO

While the entire PSO shined in this weekend’s performances, it is clear that conductor Omer Meir Wellber was the key performer.

Advice for awkward people

About finding your way out of the Gates helix

Dear Evan,

I finished coding in Gates a couple hours ago — around 4:30 a.m. — and I wanted to head home to do some laundry and play some *BioShock*, and maybe sleep, before my group had to meet for our project at 9 a.m. I was working on the fifth floor (the ground floor? Sort of?) and I should’ve left by going across the rainbow bridge since I need to get to Craig Street, but on a whim I decided to leave by way of the helix. It just kept traveling down, and I thought it was taking much longer than it should’ve. Then the helix ended, and suddenly, inexplicably, I was in this huge grassy area that I’d never seen in my life. Where am I, and how did I get here? And how can I make sure to get home so that I can have clean underwear for later today?

**Disorientedly,
Greatly Unnerved Now Since Dropped Off Nowhere,
Trying not to Keel, Instead Looking Lamely and
Ponderously for Escape Options Posthaste, Laundry
Expressly Called for Since Dubious Olfactory
Essences Seeping**

Dear GUNS DON’T KILL PEOPLE, CS DOES,

I feel your pain.... Well, no, wait, I don’t. Music majors like me aren’t so masochistic — when we go home, we actually get some sleep. I guess our quantity of clean underwear suffers, but I’m going to assume we smell better in our natural state than you do.

My grasp on technical terminology is pretty weak, so bear with me here. Last year, the Gates helix existed outside of our notions of space and time — if you were foolish enough to traverse it, you’d likely be stuck on it for days, along with the packs of wild dogs that roam its heights.

Maintenance must have tried to fix this problem over the summer, but like everything that Carnegie Mellon tries to fix, it seems to be a botched job. They must have redirected the loop to a large space off campus — looks like it was probably somewhere in Schenley Park.

That place is huge, so your likelihood of making it home in time for laundry is slim to none. You’ll have to deal with going commando for another day yet.

**Have you ever read *House of Leaves*?
Evan Kahn**

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

Art and science make beautiful collaboration

Neurons and Other Memories exhibit in Miller Gallery evoke connected world

It's not often that art and science come together, but when they do, the result can be beautiful.

The creative fusion of art, science, and even history is the concept behind the Miller Gallery's latest exhibit, *Neurons and Other Memories*, which opened on Friday. The exhibit is small and understated, taking up only the ground floor of the Miller Gallery's already modest gallery space. The majority of the works line the walls of a small rectangular room tucked behind the gallery's entrance.

Within that space, though, is a surprising diversity of works. Most pieces are from the 21st century, but other selections are centuries old, demonstrating humanity's recent history — since the Scientific Revolution, it seems — of depicting science in visual formats. One such selection is an extraction from Diderot's *Encyclopédie*: an almost fantastical illustration of a tree-man, branches and roots outlining the shape of the man like veins and arteries, demonstrating the neural connections that bind the body.

The aesthetic highlight of the exhibit is Greg Dunn's series of four beautiful, shimmering works: "Purkinje Neurons," "Synaptogenesis," "Glomerulus," and "Retina I" are enamel depictions of neural connections on leaves of gold, copper, and aluminum.

After Dunn completed his Ph.D. in neuroscience at the University of Pennsylvania, "I devoted my career to exploring the intersections between art and science," says the piece description. It seems impossible that Dunn does not mention any artistic background, though, judging by his ability to wring movement, life, and color out of his subjects.

"Purkinje Neurons" illustrates two clusters of neurons at opposite ends of the canvas, connected by fragile-looking axons (the spindly tree branch-like arms that stretch from the nucleus). Incredibly, the neurons appear to be pulling away from each other, their tendrils grasping at each other. Their struggle is splayed against a backdrop of shimmering, textured copper and gold, flecked with gentle splashes of orange and red.

In "Synaptogenesis," tangles of a strange, stringy blue foliage rest atop unsteady white trunks, which are

jagged like lightning. In "Glomerulus," nuclei surge across the canvas, axons trailing behind, chased by a wave of opaque color splashed onto a gold leaf surface. And in "Retina I," odd rectangular balloons float to the top of the canvas, axons hanging and splitting like tree roots.

Dunn's series is one of the selections that stands on its own as notable work, without needing a description to justify it. Other works take on an amplified meaning when considered in conjunction with their descriptions. Erin Crowder's "Prosopagnosia" seems abstract and obscure at a surface glance: three slides of a man's black-and-white photographed face, the features distorted and blurred. Reading the description, however, viewers discover that the subject is renowned artist Chuck Close, who suffered from prosopagnosia — face blindness — and compensated by carefully segmenting the human face. The distorting effect of the piece is meant to mimic the experience of prosopagnosia using an algorithm of the artist's creation.

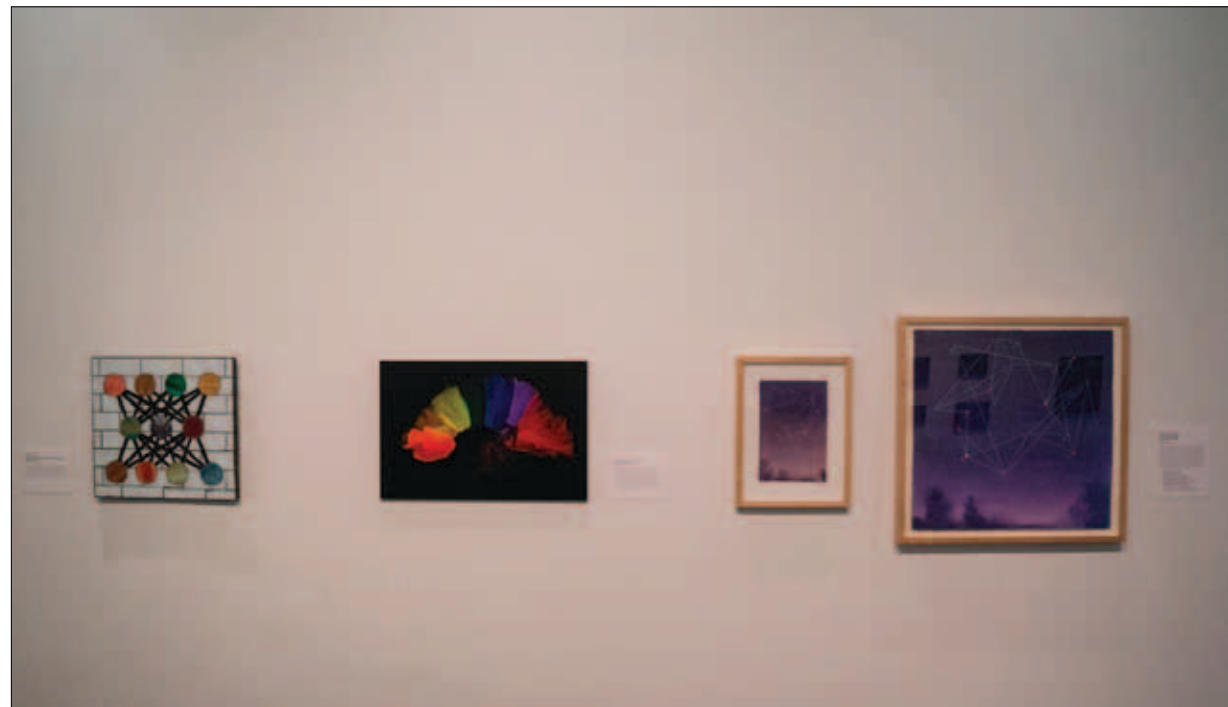
In other works, however, the descriptions try to infuse the pieces with a conceptual meaning or complexity that doesn't seem present in the stand-alone work. Qiong Zhang and Nicolas Kim's untitled work, for example, is a simple black-and-white snapshot through a tangle of tree branches against a whitewash sky. The piece is accompanied by a description carrying a lofty, ethereal message about the beauty of ecosystems and neural connections — a beautiful description, to be sure, but one that seems to lie above the conceptual scope of the piece itself.

Similarly, JoAnna Commandaros's "Synesthesia" is a tangle of wire winding into the shape of a flower, atop an eerie negative photo of what look like heads from Roman sculptures dangling like charms from a chain. The description explains the cross-sensory neurological phenomenon referenced in the title, but the only remotely synesthetic feature of the work seems to be the use of different media. The likeness of the piece to a synesthetic experience seems a stretch in this instance.

Neurons and Other Memories is a quick, pleasant stop for the curious passerby, taking half an hour at most to view in its entirety. Though forced or stretched in some works, the conceptual and visual links between art and science are beautifully evoked on more than a few canvases. In this way, it's a perfectly appropriate exhibit for a Carnegie Mellon gallery, on a campus that promotes the intersection of disciplines and doggedly seeks links between seemingly unrelated intellectual areas.

Rachel Cohen | Publisher

Neurons and Other Memories will be on view at the Miller Gallery through Oct. 26.



Abhinav Gautam | Staff Photographer

Neurons and Other Memories examines interactions between art and science, with emphasis on history.



I <comma> Sincere Animal redefines print media

Exhibit is effectively jarring, but leaves audiences searching for a common thread throughout

Art is an experience that should assault the eyes, the ears, and the mind with equal tenacity to make audiences feel and react. *I <comma> Sincere Animal*, which premiered on Friday night at The Frame Gallery, did just that, with visual, auditory, and kinesthetic elements, and more.

At the premiere, there were provocative photographs, glitter, jello shots, live performance, blacklight confessions, and pizza. What more could one want?

A collaborative work from a class on printmaking, *I <comma> Sincere Animal* combines works from sophomore art major Olivia Smith, senior art major Justin Old, and junior art majors Coty Vancura, Lindsay Cavallo, Heather Cowie, and Paul Alexander Walker.

The artists all created different exhibits that were presented in different mediums. Yet all three pieces focused on the same theme: extending a written book and making it their own, according to the literature available at the gallery.

“It’s a print show where we explore what the definitions of what print is,” Walker said.

On the main floor, exhibits by Vancura, Smith, Old, and Cavallo greeted visitors, who ranged from children to parents over the family weekend.

Vancura’s project centered, interestingly, around jello shots, each marked with a sticker that read ‘Who dun it?’ with a line. Visitors were to finish the shot and then fill in the dotted line with their name or who they thought was to blame.

According to Vancura, the shots and the mystery represent his violently dynamic relationship with a girl named Cece.

“They’re all memories; this one is when Cece and I went to see Lemuria in concert. She got wasted on jello shots, and told me that she had been cheating on me with some other guys. So the whole rest of that issue I was trying to figure out ‘Who dun it?’, like whose fault was it that she cheated and that our relationships got real f***** up?” said Vancura.

In a corner of the exhibit, a nest of children’s toys and random scraps of paper seemed wistful and abandoned, but shortly after, Cavallo settled into the center to perform her piece.

Crouching in the center of the bed of garbage and



Kevin Zheng | Staff Photographer

Walker’s performance concentrated on showcasing different types of touch. Here, he represented intimate touch by asking visitors to use a wipe to remove glitter from his body to represent leaving a mark on someone else’s body.

seemingly meaningless material, Cavallo made gagging noises, sticking her own hands into her mouth for several minutes until she seemed to be satisfied, then simply got up, wiped her hands on her jeans, and walked into the crowd of people watching her.

Downstairs, in an area that is typically not used by artists displaying their work at The Frame, Walker’s piece was striking and meaningful. Throughout the upper exhibit, Walker distributed pamphlets about different types of touch, featuring photographs of himself with glitter in the different places that would indicate different levels of intimacy. The last pamphlet, entitled ‘Intimate Touch’ was accompanied by Walker himself, caked in glitter and sitting on a red couch, smiling invitingly. Viewers were supposed to grab a wipe, wipe some of the glitter off of Walker’s body, and then stick the wipe to the wall.

“I’m working with the concept of leaving a mark on someone else’s body. I really don’t know anything about

printmaking, but I wanted to work with intimate touch from someone else. Having people remove the touch from me makes it extremely intimate,” Walker said.

In the upper room, an exhibit by Cowie featured a room lit only by black lights. The walls were painted with green, black light paint in order to convey a child-like voice describing their dreams. Cowie sat in the middle and read passages from a whimsical, yet dark child’s diary.

Overall, the exhibit was jarring. There were whimsical elements, but often, they were unclear and too ambiguous for people who didn’t know the artists to interpret.

The space, however, is used as effectively as possible, and the commotion outside was certainly indicative of the success of the exhibits inside.

Laura Scherb | Operations Manager

Pittsburgh Public Theater stages Williams classic

The Glass Menagerie is revisited, although with very few innovations despite the set

To celebrate its 40th anniversary, the Pittsburgh Public Theater opened its season on Oct. 2 with the same play it opened its doors with 40 years ago: Tennessee Williams' *The Glass Menagerie*.

The Glass Menagerie tells the story of a disjointed family of three. Breaking under the tedium of a monotonous life, Tom dreams of abandoning his sister, Laura, and mother, Amanda Wingfield, to seek adventure as his father did, while his mother tries desperately to find a suitor for his mentally and physically frail sister.

There are no new character interpretations in this production, but Cathryn Wake and Jordan Whalen are satisfactory as Laura and The Gentleman Caller, respectively. The most problematic character (Tom) is played by Fisher Neal, whose rigid inflection erases the sincerity from his words; however, his performance, as well as all the other cast members, is elevated by the dynamic performance by Lynne Wintersteller (Amanda, the mother). With a fast and sharp southern accent, Wintersteller brings depth to a character that is usually defined solely for being unable to move past her glory days of young.



Courtesy of the Pittsburgh Public Theater



Courtesy of the Pittsburgh Public Theater

Laura (Cathryn Wake) plays a frail and emotional girl who is called upon by The Gentleman Caller (Jordan Whalen) in one of the Pittsburgh Public Theater's production's most powerful character pairings.

She not only exemplifies a nostalgic woman past her prime, but makes the audience believe that her character does truly care about her children.

Wintersteller's success is only matched by the design team of this production. The set is the first floor of a house, raised on a jarring octagonal platform that hints at future dissonance. At first, the house seems inviting, but upon further inspection one can see that the furniture is mismatched, there is a stain on the couch, and the pillows are ornate, but raggedy. It is as if the family is trying too desperately to cover up household flaws, especially in the second act; when more "stuff" — a fringed floor lamp, a silver candlestick on top of a disproportionally small dining table, a rug that quite literally covers another rug up — is added, it is obvious that this family has something to hide.

While there was no new revelation at the end of this production, it is a solid performance worth seeing. The Pittsburgh Public Theater decided to honor the American classic that was the first show it ever produced, and it does so with dignity and success.

Vira Shao | Junior Staffwriter

Pittsburgh Public Theater's production of The Glass Menagerie runs from Oct. 2 to Nov. 2. Student tickets (26 and younger) are available on select nights for \$15.75; valid ID is required.

Tom (Fisher Neal) and his mother Amanda (Lynne Wintersteller) contemplate their family's fragile situation in Tennessee Williams' classic play.



American Horror Story gets even freakier

The show's fourth season, *Freak Show*, is a welcome return to the dark tone of earlier ones

Note: This article contains spoilers for American Horror Story: Freak Show, as well as previous seasons of the series.

What's scarier than a killer clown with a smile plastered on its face creeping through your house at night?

Answer: A killer clown violently stabbing your significant other in a grassy field in broad daylight.

American Horror Story, the brainchild of creators Ryan Murphy and Brad Falchuk, returned on Wednesday for its fourth season, *Freak Show*, delivering what promises to be a darker season, a welcome change in tone in comparison to the anthology's third season, *Coven*.

Taking place in Jupiter, Fla. in the 1950s during one of the last freak shows in America, *Freak Show* gives fans across the web who have been clamoring for a circus-themed season exactly what they've wanted. Filled with red- and white-striped carnival tents, carousels, and Ferris wheels, the show possesses a pop and pizzazz not seen in other seasons of the anthology series. There is singing, confetti, and people, albeit very few, fawning over the freaks who call the carnival their home.

Despite the showtime feel, *Freak Show* is notably darker than *Coven*, which followed young witches as they trained in a boarding school to become the Supreme witch. *Freak Show*'s darkness is somewhere between the third season and the second, which was set in an asylum and completely unforgiving to viewers not attuned to horror. The fourth season, while more brutal

than the third season, has time to deliver jokes (like bad singing) and present a sense of wonder around the freak show, rather than the immediate sense of horror presented in *Asylum*, in which the opening scene ended with a man getting his arm torn off.

One of the most spectacular elements of this new season is the unusual people who inhabit the screen. No one is without a deformity or alteration to their body, and almost everybody seems to embrace it. A bearded woman, Ethel Darling, played by Kathy Bates, is right-hand woman to the show's leader, German expat Elsa Mars (Jessica Lange). The two do everything in their power to keep the freak show operating; it's clear within the first episode that many of the freaks consider the show home, including Darling. Among the rest of the family of freaks is the world's smallest woman who is, in fact, played by the world's smallest woman, Jyoti Amge, as well as a man with arms that are not fully formed, a man who eats animal heads straight off the living body, and Pepper (Naomi Grossman), who avid viewers will be happy to know is back from *Asylum* in the same role. Grossman is the only actor or actress to date to be in two seasons of the show playing the same character.

The standout freak of the family, though, is the newest addition to the show, conjoined twins Bette and Dot Tattler, played by Sarah Paulson. In Dot and Bette, Paulson delivers two distinct characters. Bette is full of wonder and joy, willing to share her thoughts with others and handle what is thrown her way thus far in the show. Meanwhile, Dot describes the freak show as the "gates of hell" and refuses to succumb to Mars' attempts to

connect with her. Mars finds Dot and Bette after they are admitted to the hospital for reasons you'll have to find out by watching yourself! Paulson masterfully plays these characters in stark contrast to one another to show how, despite being joined at the neck, they are distinctly different.

However, Paulson doesn't completely steal the show. That award belongs to Twisty the Clown. Co-creator Murphy promised fans before the show aired that Twisty would be the scariest clown viewers have ever witnessed, and so far, he's right. It's undeniably terrifying to watch a clown murder the people of the town. What's even more terrifying is that Twisty seems to be acting this way because he wants to be accepted, or at least wants company. The clown watches the freaks longingly from afar at one point while they perform an act similar to his murders, and he even kidnaps some of his victims.

While the show is off to a strong start, viewers won't truly know which direction the show is headed until at least the next episode. The season preview, which plays at the end of the first episode, promises a minimum of four additional characters, including con artists, a three-breasted woman, and a strong man. And with a murderous clown whose intentions are not known, the terror could go anywhere.

If it heads in the direction it is going now (glamour with a brutal edge), this season will be one of the more dynamic of the anthology. And unlike the last season (whose only mystery was "Who will be the next Supreme?"), this season seems to have a great mystery surrounding Twisty. First, what does he want? Second, who is he? If the show maintains this mystery, it will keep viewers coming back for more like it did with the unknown Rubber Man of the first season (*Murder House*) and the gory mask-covered Bloody Face of the second season. The identities of both monsters were revealed later in the season, leading to intriguing plots. Here's hoping that this season of *American Horror Story* will keep coming back with horror that toes the line and a mystery that isn't solved too soon.

Braden Kelner | Editor-in-Chief



Photo courtesy of SuperStitchieux via Wikimedia Commons

The title sequence of this year's *American Horror Story* is a series of creepy stop-motion creatures that are sure to haunt your nighttime dreams.

Mermaids, sick drum beats, and dreadlocks

A night with Memphis Hill as they prepare to release their debut album, *Backwards Beginnings*

by **Sid Bhaduria** | Staffwriter

As I walk up the steep steps to Memphis Hill’s precariously perched house not far from campus, clutching a hastily-bought box of chocolates that I hope no one notices is from the CVS next door, I stop for a moment in front of the door to admire the feel of the house. Lawn chairs with crushed beer cans, a classic round grill — it all looks like a scene ripped from a southern frat house.

Hours before the release party for their debut album *Backwards Beginnings*, I knock on the painted front door, to see a smiling man in ridiculously amazing dreadlocks and large rimmed hipster glasses greet me — Memphis Hill’s drummer, chemistry master’s student Collin Cherubim, who explains that the band is waiting for a shipment of their album (also available for streaming on SoundCloud). After hasty introductions, I’m shown into the band’s house — a collage of original artwork painted by the band’s close friends decorate almost every wall, culminating in a visually insane community art project. Blues-rock artist Gary Clark Jr. is playing in the background, the distorted guitar contrasting with a smooth and measured voice.

Over the four hours or so I’ve spent talking with the members, going to their show, and listening to their debut album, it’s clear that, above all, Memphis Hill’s greatest asset is their fans. With a dedicated core of close friends cooking together, doing homework, going to all the shows, as well as creating insanely good artwork for the walls, shirts, album covers, and posters, Memphis Hill is a five-person band only by technicality. But damn are those five people talented.

I’m shortly introduced to guitarist Mac Inglis, who is wearing a skintight jet black bicycling outfit; guitarist Vic Cherubim (who would look startlingly like his brother, if Collin would swap some of his dreadlock length for facial hair); bassist Alex Holloway, a senior cognitive science major whose long blonde hair and disarming smile carries an overwhelming sense of good-will; and finally, female vocalist Elle Allen, a master’s mechanical engineering student who at one time split her time between singing, building race cars, creating robots, and grad-level research.

An interesting cast to say the least, and indeed, while talking with them, I began to see the dynamics at play within the band: Mac’s charming sense of humor, Collin’s irresistible boy-next-door friendliness, Alex’s analytical and thoughtful answers to questions the rest of the band

had trouble answering, Elle’s warm laugh that would melt Frosty the Snowman, and of course Vic’s oddly musing proclamations that are hard to not good-naturedly make fun of. At one point, after asking whether the members’ college educations impacted their music in any way (hoping to fish out a story where Elle fixed a guitar pedal or something), Vic uttered the sentence, “What you do is who you are. Who you are is what you do. The music you make is coming from you, man” (Ok, I added the “man” at the end, but still). My first thought was, “Wait, seriously?” followed by, “That’s actually a good point, and I’m definitely going to quote that.”

The band later took me down to their practice area in the basement. An organ that the band bought on Craigslist stood by the left wall, and they informed me of a period of time when they had a 50-year-old man drive from an hour-and-a-half away to jam on the organ with them. Surprisingly, that deal didn’t work out for too long, and so the organ remains unused (and if anyone reading this can play a killer organ and likes blues rock, I encourage you to seek the band out). The lighting of the basement looks like an authentic replica of a Snoop Dogg (Lion?) music video, with deep purple shades and a single bright light accenting Memphis Hill’s signature mermaid logo on Collin’s drumset. I never got the chance to ask them why they chose a mermaid of all things, but the logo is amazing, with the

mermaid’s entire body formed out of the letters Memphis Hill in psychedelic ’60s font (if anyone has a better name for the font that Jimi Hendrix used for his album *Are You Experienced*, I’m open to suggestions). The name of the band itself, Memphis Hill, comes from one of its biggest supporters who I’m told is a “Garden Fairy. A beacon of light that shines down on all of the band and a savior of children’s lives.” Sounds like a cool person.

As I stood there listening to the band’s jam sessions straight off the machine while scribbling in my notebook, I pondered the musical style of Memphis Hill. They have a wide range of musical styles, ranging from alternative rock, to more blues rock, to psychedelic, and more. Hearing their improvised session, it’s clear that, above all, the band has a clear sense of musical space. The guitar and drumming fade when Elle picks up the tempo of her vocals. When she subsides again, Collin picks up a syncopated rhythm, and Mac adapts with a wailing, distorted lick. It’s truly amazing to see the sheer musical talent the band possesses, especially with their cumulative history of rejecting classical and formal training.

Collin’s love for the drums started at an early age (“I actually started off with the accordion,” he joked), but he traded in rote memorization of rudiments for jamming out to ’80s hair metal with a more ... alternative teacher. Alex has a similar

history, having been involved with violin and trumpet, and then falling off with music until he became roommates with Collin his first year at Carnegie Mellon. He’s only been playing for four years, and while his bass lines aren’t too complex, they’re driving, and most importantly, they synergize with Collin’s drumming almost seamlessly (moral of the story — it’s never too late to pick up an instrument!).

Elle also got started taking classical voice lessons early on, but moved on to rock, jazz, and, now, whatever she feels like. Listening from the machine, I was impressed with her vocal range, tone, and ability to improvise syllables and sounds that mesh with the rest of the band. Perhaps the most surprising element of the recording I listened to was when Vic moved from lead guitar to sort of a supporting role, Mac sometimes stepped up with a rather surprising repertoire. For someone who wears flannel shirts with suspenders, he can improvise some startlingly good and varied rhythms, ranging from Led Zeppelin-like wailing to eastern-Arabian sounding rhythms. As awesome as hearing the machine was, I was eager to listen to the real deal. Plus, my time with the band was way longer than I thought it would be, and I was really late for Concepts of Math. So, fashioning a short excuse that the band understood like only a band composed of Carnegie Mellon students would, I made my way back down the steep steps, counting down the hours until their album release concert at AVA Cafe and Lounge.

The first thing I noticed walking into the lounge was the crowd. I had heard about the band’s loyal fan base before, but watching everyone in the room, it was almost trivially

easy to pick them out. They were the ones jamming out the hardest, the ones at the very front talking with their other friends who they’ve been coming to Memphis Hill concerts with for almost two years. They’re the ones who stayed even after the band exhausted their repertoire of original songs, the ones who still screamed for an encore anyway, the ones who refused to leave even as the band went over their allotted time, the ones who were there for one purpose only: to support their favorite band.

They were fun people, and I didn’t feel like an outsider for a second. I vaguely remember jamming out with a cute girl over Collin’s ridiculously good drumming (seriously, imagine someone with the speed of a punk rock drummer, but who actually knows how to play more than one thing and can switch from metal thrashing to syncopated blues at the drop of a hat), watching as Vic nonchalantly shredded the guitar with the facial expression of someone ordering a coffee at Starbucks, some girl putting a ridiculously large cowboy hat on my head that wasn’t mine, then dancing with some dude who was wearing a red dress for some odd reason, staring at a picture of an octopus being shot in the head for like five minutes straight to the tune of one of Memphis Hill’s psychedelic numbers, and discussing why *Doolittle* was The Pixies’ best album at the

bar. I had a good time, is what I’m saying. After the show, Vic was gracious enough to invite me to the after party, but as soon as I headed home, I felt so tired I passed out as soon as I hit the bed, ears pleasantly ringing, with a Memphis Hill T-shirt and poster in my hands.

It’s hard to say anything bad about the band, considering the fact that they’re awesome people and insanely talented, but the fact remains that Memphis Hill has a long way to go if they’re looking to get even bigger. The songs are good, great even, but on each song, I can’t get over making the obvious connections to the sounds of other bands. Much of this can be traced back to their creative process. They take their improvised jams (clocking in at over nine minutes) and cut the parts they don’t like. Their first album



Fifth Avenue Homes and Estates

Purchase Your Home ~ Sell Your Home

**Serving the University Community for
all their Real Estate Needs**



www.FifthAvenueHomesAndEstates.com



www.PittsburghRealestate888.com

412-683-3333

consists simply of the first eight finished songs they had, and indeed the band members themselves disagree on the direction their sound is evolving.

While Mac, for example, believes that the band is heading toward a more roots rock vibe, and away from the softer tracks found on their debut album, every band member has a different opinion. As Collin aptly pointed out, the inherent diversity of the band’s musical backgrounds is both a strength and a weakness. Between the members of the band, they have the elements to create a unique Memphis Hill sound. For example, I wish Mac would have included some of the more esoteric melodies from the recorded jams they showed me on the album. I want to hear Elle singing in an Ella Fitzgerald voice over Arabian guitars. Most of all, I wish more songs featured Collin. Truly the heart of the band, on their best songs like the song “I Feel You Sweet Thing,” an apt listener could accurately guess the entire band’s movement at a given point in time solely by listening to Collin’s rhythmic tendencies. I want to hear the band’s psychedelic tendencies more, and while Elle’s singing is often so good I don’t care, an evolution of the band’s lyrical songwriting could be used.

In summary, perhaps the best thing the Memphis Hill band can do right now is nominate one of their own to be their producer for the entire album to develop a unique, marketable “Memphis Hill” sound. The band can go a long way in getting another instrument, like the organ or perhaps a trumpet. Don’t let this deter you from listening, however. Memphis Hill is a band to keep your eye on, and their musical talent and potential is undeniable. Support them by spreading the word about *Backwards Beginnings*, available on SoundCloud and CD, and by coming to their next show on Nov. 14 with Beauty Slap.



Sid Bhaduria | Junior Photographer



Photo courtesy of Memphis Hill



STS9 entrances audience with two full sets

Top-grossing tour act plays unique, nonstop music in a classically joyful concert until 1 a.m.

On Friday, jamtronica group Sound Tribe Sector 9 (STS9) performed at Stage AE, playing two full sets and a five-song encore that lasted until nearly 1 a.m. This stop, the second on the band's fall tour, and their first full tour featuring new bassist Alana Rocklin, proved the band is reaching for new heights in their live show, and to great success.

Formed in Atlanta in 1999, STS9 has grown in the past 15 years to become one of the most celebrated live shows in music today, ranking among *Pollstar Magazine's* list of top-grossing touring acts. Mixing live rock instrumentation with electronics, the band describes their sound as "post-rock dance music." The band underwent a massive change earlier this year with the departure of founding member and bassist David Murphy. Many fans questioned the future of the band, as Murphy was considered an integral aspect of both the band's sound and live performances. Rocklin, however, certainly proved herself during the band's run of music festivals this past summer, and STS9 has actually begun transitioning between songs without stopping the flow of the music — an idea which had never occurred to Murphy.

Friday night's show at Stage AE was a near-perfect exhibition of the group, with both sets spanning the entirety of the group's diverse catalogue of sounds and genres. The first set was geared toward hardcore fans, with many down-tempo songs and extended jams. It included an opening of the grooving bass track "4 Year Puma" played into "F Word."

Other highlights of the first set included "The Rabble," a song that mixes elements of rock and dub-electronica to create a truly awesome live experience, and the set closer, "Circus," which is often cited as the band's signature tune — with good reason. The song is 10 minutes of pure bliss, with guitarist Hunt Brown's fingers dancing up and down the fret board, eliciting tiny explosions of joy with each note. I strongly recommend looking up a recording of the band performing the song live — STS9 posts soundboard recordings of all of their concerts on the Internet for fans to download — if you're ever looking to significantly brighten your day.

After a short set break, the band returned and played a second set that was much more evocative of their recent dive into heavier electronica. Songs such as "Golden Gate" and "World Go Round" with their funky grooves and cheerful tones, are staples of their festival performances. "When The Dust Settles," with its low and droning synthesizers and digitized vocals, had the room feeling like a '90s warehouse rave — flashing, colorful strobe lights included.



Courtesy of Marc Whitman via Flickr

STS9, a "post-rock dance music" group performed at Stage AE on Friday. The band performed their lengthy, ambient, and unique music until nearly 1 a.m., when the venue turned on the lights to ask them to wrap it up.

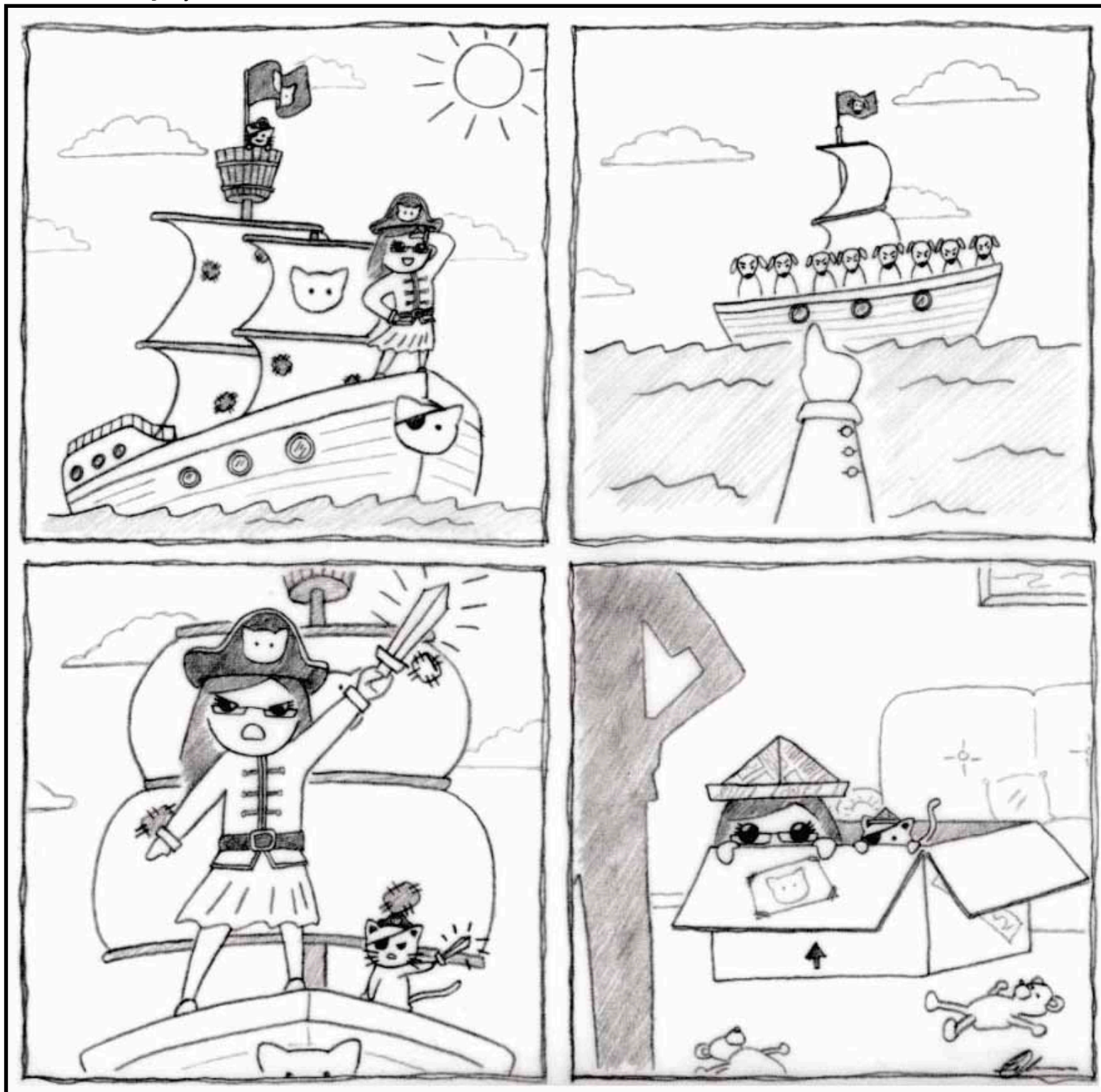
The encore was a real treat, and included Annie Clark performing two songs on an upright bass as part of the band's Axe The Cable segment — wherein they play without using synthesizers and other heavily-electronic equipment. Essentially, they play as a rock group. The band played through five songs, and were setting up to play a sixth, when the venue turned the lights on, making it clear that 12:45 a.m. was late enough.

One important thing to note is that in the first two stops of the band's fall tour, they did not repeat a single song. A person I spoke to after the first set proclaimed that he'd seen the band four times in the past year, and had not heard a single song the band had just played live before. That just speaks to the amount of dedication and effort STS9 puts into their live performances and overall musicianship. While big-name tours, such as the Jay-Z and Beyonce "On The Run" tour over the summer may have grand production values, they're not all that hard to pull off. It doesn't take much of a performer to play the same exact show every single night, singing the same

songs in the same order, and stopping at the same point to ask "(Insert city name here) how you feelin' tonight?" It's all one mass-produced product, like Domino's Pizza, except it costs you about a hundred dollars a ticket for the nosebleeds. STS9, however, ensures that every slice of the tour has its own special flavor, and it's this kind of commitment that creates a rabid loyalty in their fan base. STS9 fans, like the fabled Deadheads of old, travel far and wide to hit every stop of the tour that they can, because it's always worth the journey.

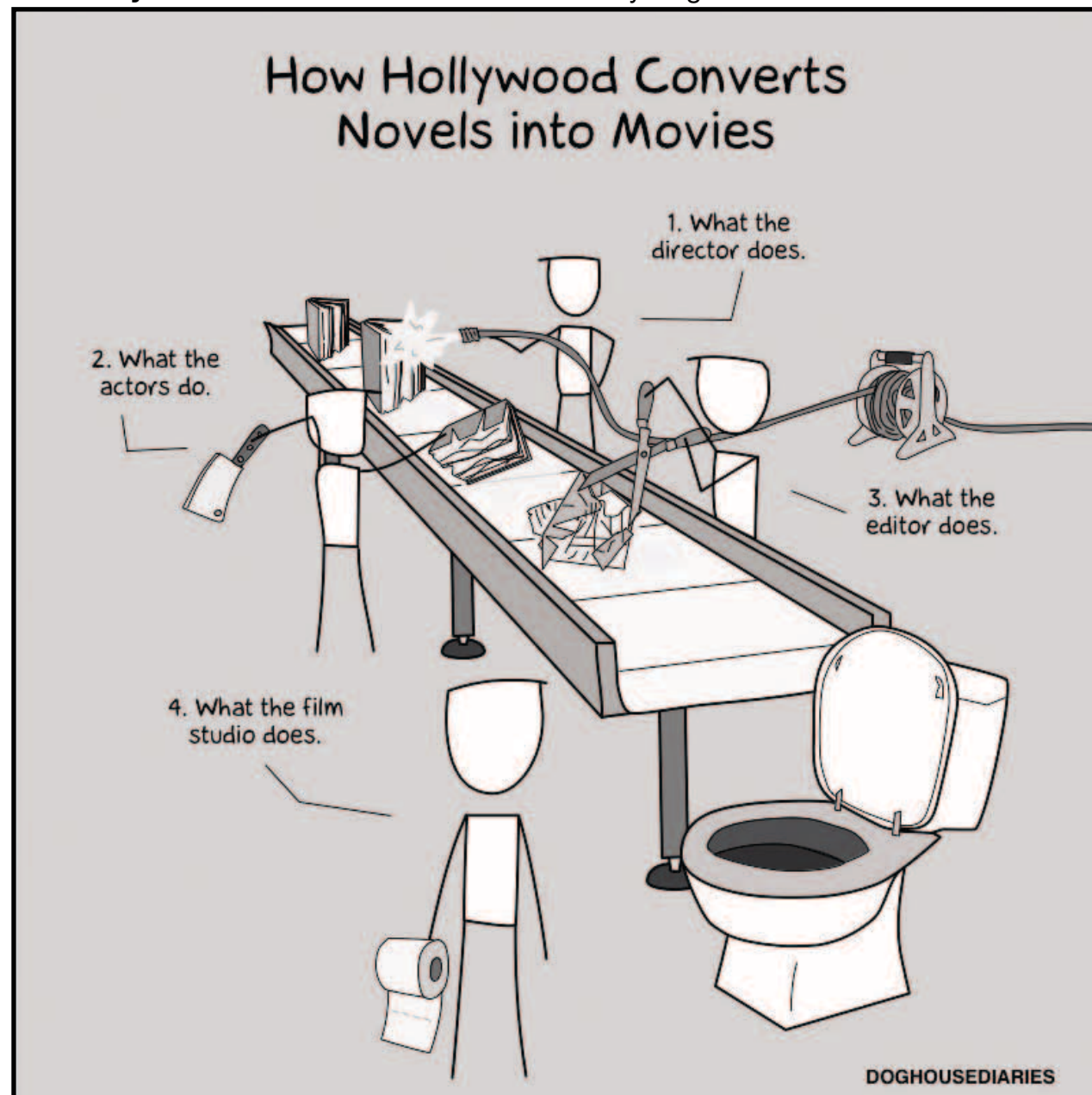
Joey Peiser | Pillbox Editor





email@exocomics.com

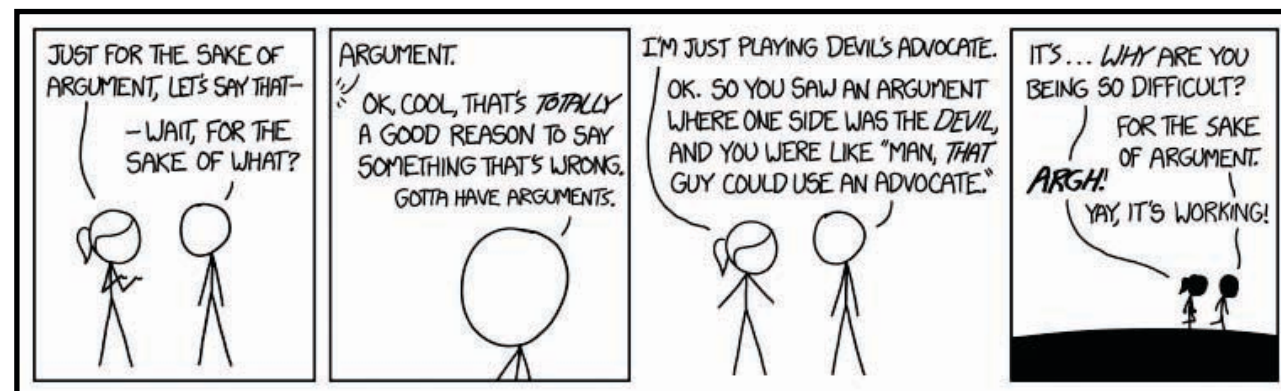
exocomics.com



doghousediaries@gmail.com

thedoghousediaries.com

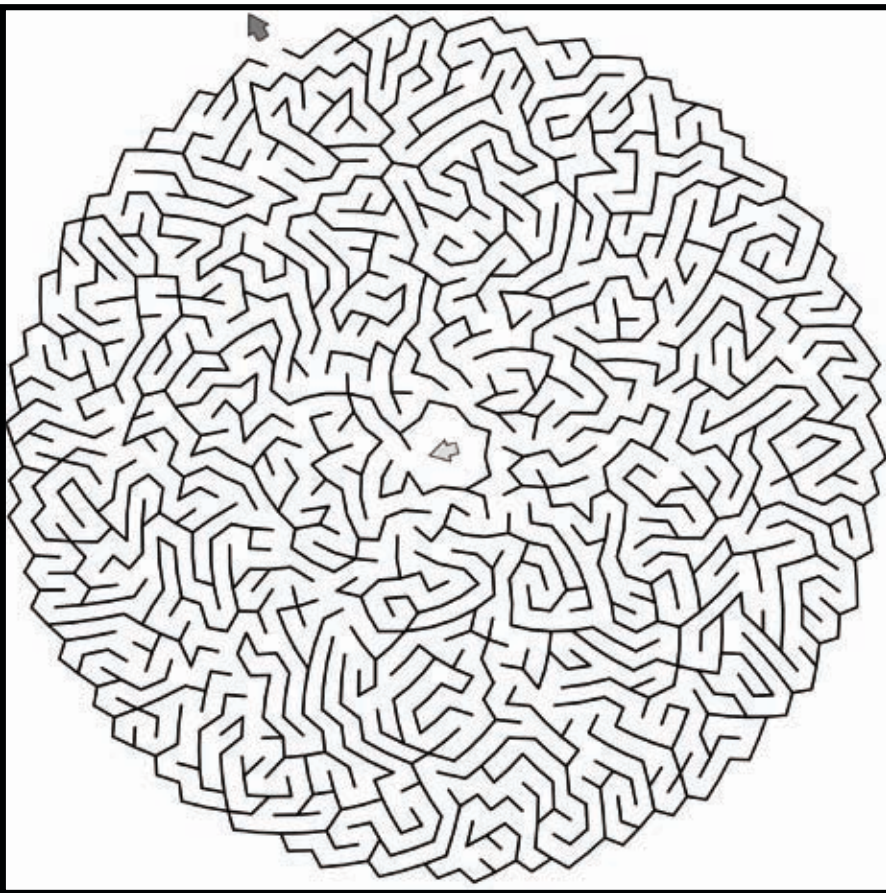
For the Sake of Arguing by xkcd



press@xkcd.com

xkcd.com

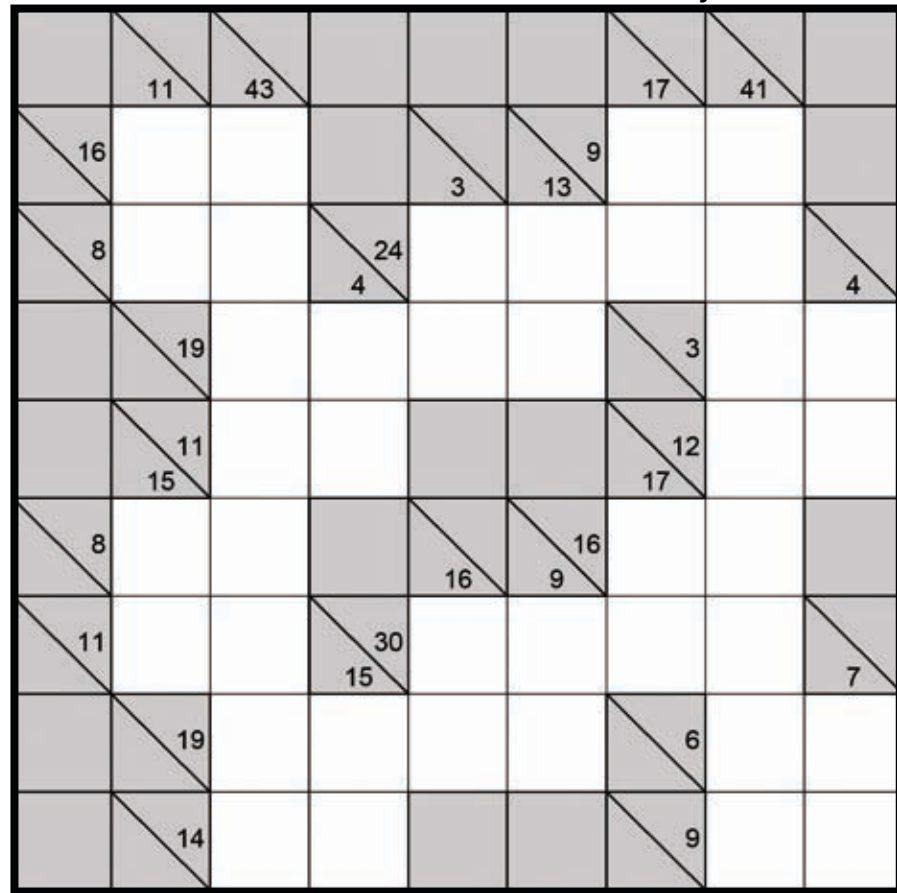
Maze Puzzle: Challenging Difficulty



Maze courtesy of www.krazydad.com

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

Kakuro Puzzle: Hard Difficulty



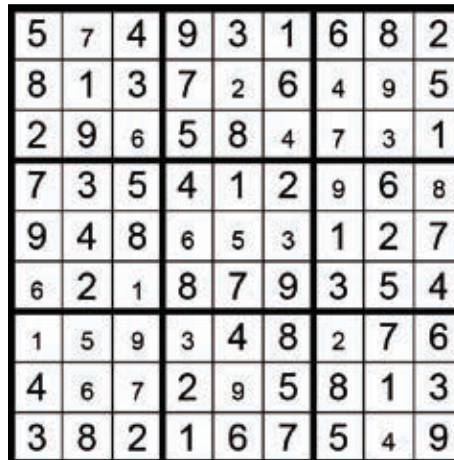
Kakuro courtesy of www.krazydad.com

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 on its top. No number may be used in the same row or column more than once.

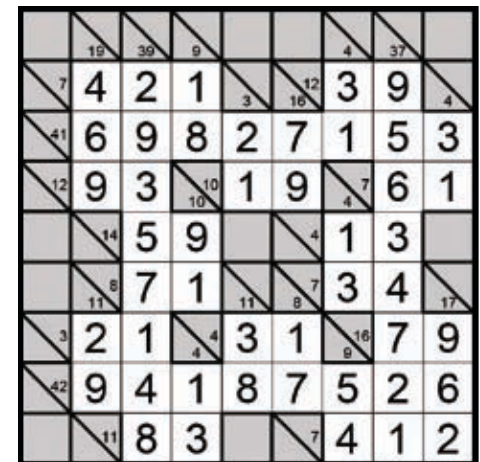
Solutions from Oct. 6



Crossword



Super Tough Difficulty



Tough Difficulty

Horoscopes

Midterm Predictions

aries

march 21–april 19

You will spend over \$200 on energy drinks at Entropy. Unfortunately, that much Red Bull will not help you on your midterms.

taurus

april 20–may 20

If you're Irish, you've got the Irish luck! Otherwise it's time to play some Russian Roulette.

gemini

may 21–june 21

If you pass 100 levels of Candy Crush, your test will also be crushed.

cancer

june 22–july 22

Be on the look out for something surprising! After this unexpected encounter you'll have a different opinion on midterms.

leo

july 23–aug. 22

Don't eat pizza; It will give you a stomach ache and you won't be able to take your tests anymore

virgo

aug. 23–sept. 22

The forth iteration of *Super Smash Bros.* is coming out. Don't get too hooked; you'll become a competitive pro gamer and miss your midterms.

libra

sept. 23–oct. 22

You've worked long and hard for these tests, and your results will show how much it's paid off. Now you can rest easy for the mid-semester break.

scorpio

oct. 23–nov. 21

Bite the bedbugs; It'll give you good luck on your next test.

sagittarius

nov. 22–dec. 21

Sagittarians are known for their gentle nature — midterms, however, are not. Go hard or go home.

capricorn

dec. 22–jan. 19

You'll meet a man with brown hair, glasses, and a skinny build. He will help you study. Find him.

aquarius

jan. 20–feb. 18

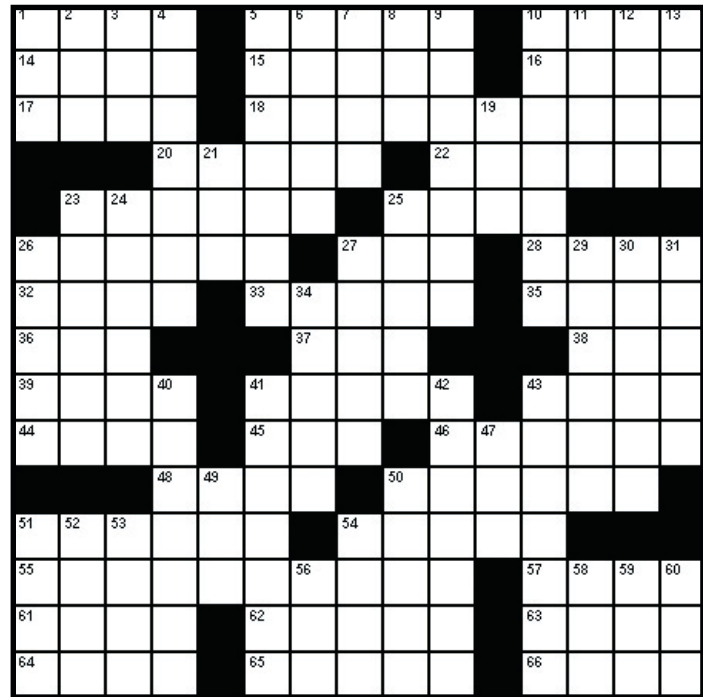
Forget midterms. Let's go have a pool party instead at the University Center. Midterms don't matter anyways.

pisces

feb. 19–march 20

Looks like your luck wasn't as good as you thought; That late night studying wasn't so worth it after all. Better luck next time.

Maryyann Landlord | Comics Editor



Crossword courtesy of *BestCrosswords.com*

ACROSS

- Lubricates
- Hot stuff
- Plumlike fruit
- Dudley Do-Right's org.
- Driver's invitation
- Make weary
- Sandberg of baseball
- Occurring at constant temperature
- Shows up
- Overturns
- Richards of "Jurassic Park"
- Struck, old-style
- Bring into being
- Pampering place
- Put your hands together
- Winder for holding flexible material
- Klondike territory
- Roll call call
- "You've got mail" co.
- Composer Delibes
- Neither's partner
- Ballet bend
- Stone marker
- Pouting grimace
- All there
- Mohawk-sporting actor
- Pines for
- Perlman of "Cheers"
- Required
- Like some tires
- Stacked
- Approval
- Now ____ me down...
- Revivalists
- Inventor Howe
- Short letter
- "_____ She Lovely?"
- Tears
- Secluded spot

DOWN

- Bruins great Bobby
- Very cold
- K-O connection
- Distinctive
- Roof flue
- Old Testament book
- Wall St. debuts
- Three sheets to the wind
- Brutal
- Strain
- Describe
- Toward the mouth
- Congers
- Center starter
- Bran source
- Ring of color
- Land, as a fish
- Bobbin
- Dice game
- Shooting sport
- "The Raven" maiden
- About
- Israel's Shimon
- Extreme
- Most strange
- Ore refinery
- Blind
- Tumultuous
- Extra-wide shoe size
- Occurrence
- Battery type
- Wife of a rajah
- Deck quartet
- Pest control brand
- Nabokov novel
- Pub pint
- Chat room chuckle
- Downed
- Craving



Monday 10.13.14

OK Go. Mr. Small's Theatre. 8 p.m.

Remember that awesome video where a bunch of guys did a synchronized dance on treadmills? Well, that music video was for OK Go's "Here It Goes Again," and they're playing at Mr. Small's. Can't guarantee they'll bring the treadmills, but they'll definitely bring the indie-pop. Tickets can be purchased at ticketfly.com.

Tuesday 10.14.14

Fleetwood Mac. CONSOL Energy Center. 8 p.m.

Your parent's favorite band — and maybe yours, they're really good — are playing at CONSOL. Expect a lot of middle-aged dancing, and definitely some tears when Stevie Nicks sings "Landslide." Tickets can be purchased at ticketmaster.com.

Boombox. Rex Theater. 8 p.m.

This funky electronic and rock duo will be bringing fresh jams to the Rex. Expect corny dancing, and plenty of it. Tickets can be purchased at ticketfly.com.

Wednesday 10.15.14

Bassnectar. Stage AE. 8 p.m.

The king of the sound will be bringing his immersive live experience, including more speakers than a Bose warehouse and an LED screen larger than the ones in Times Square (okay, maybe that's a bit of an exaggeration), to Stage AE. Expect to see brains on the floor from the number of minds blown. Tickets can be purchased at stubhub.com or through Carnegie Mellon Facebook networks.

J Mascis. Club Café. 8 p.m.

The Dinosaur Jr. frontman will be playing a solo show at Club Café. Expect to see hipsters of all ages standing still together. Tickets can be purchased at ticketfly.com.

Friday 10.17.14

SPANK! The Fifty Shades Parody. Byham Theater. 8 p.m.

This hilarious new musical reimagines the characters of the popular novel with sharp comedy, musical numbers, and other surprises. Tickets can be purchased at trustarts.culturaldistrict.org.

The Gaslight Anthem. Stage AE. 7 p.m.

These Jersey punk rockers have reached the pinnacle of Garden State musical success — counting Bruce Springsteen as a fan — so you know they're worth checking out. Folk-punk act Against Me!, who have been undergoing a resurgence in popularity following lead singer Laura Jane Grace's coming out as transgender, will be opening. Tickets can be purchased at ticketmaster.com.

Saturday 10.18.14

Fall Festival. Heinz Hall. 8 p.m.

Join the Pittsburgh Symphony Orchestra in a celebration of autumn. Playing songs inspired by the changing of the leaves, including "Harry's Wondrous World" from *Harry Potter and the Sorcerer's Stone* and selections featured in Disney's *Fantasia*, this evening is sure to delight one more than a pumpkin spice latte. Tickets can be purchased at trustarts.culturaldistrict.org.

tUnE-yArDs. Mr Smalls Theatre. 8 p.m.

The quirky musical project of songwriter Merrill Garbus will

be performing at Mr. Small's. When playing live, Garbus creates drum loops on the spot and adds layers of multiple instruments, including ukulele, electric bass, and vocals. So it should be an interesting show. Tickets can be purchased at ticketfly.com.

Ongoing

The Glass Menagerie. O'Reilly Theater. Through Nov. 2. The Pittsburgh Public Theater presents the Tennessee Williams classic, inspired by his own life and mentally fragile family. Tickets start at \$15.75 for students and anyone under the age of 26. Tickets can be purchased at trustarts.culturaldistrict.org.

Chuck Connelly: My America. The Andy Warhol Museum. Through Jan. 4.

As part of the 2014 Pittsburgh Biennial, the Warhol is presenting works from Pittsburgh native and surrealist painter Chuck Connelly. Admission to the museum is free with a Carnegie Mellon student ID.

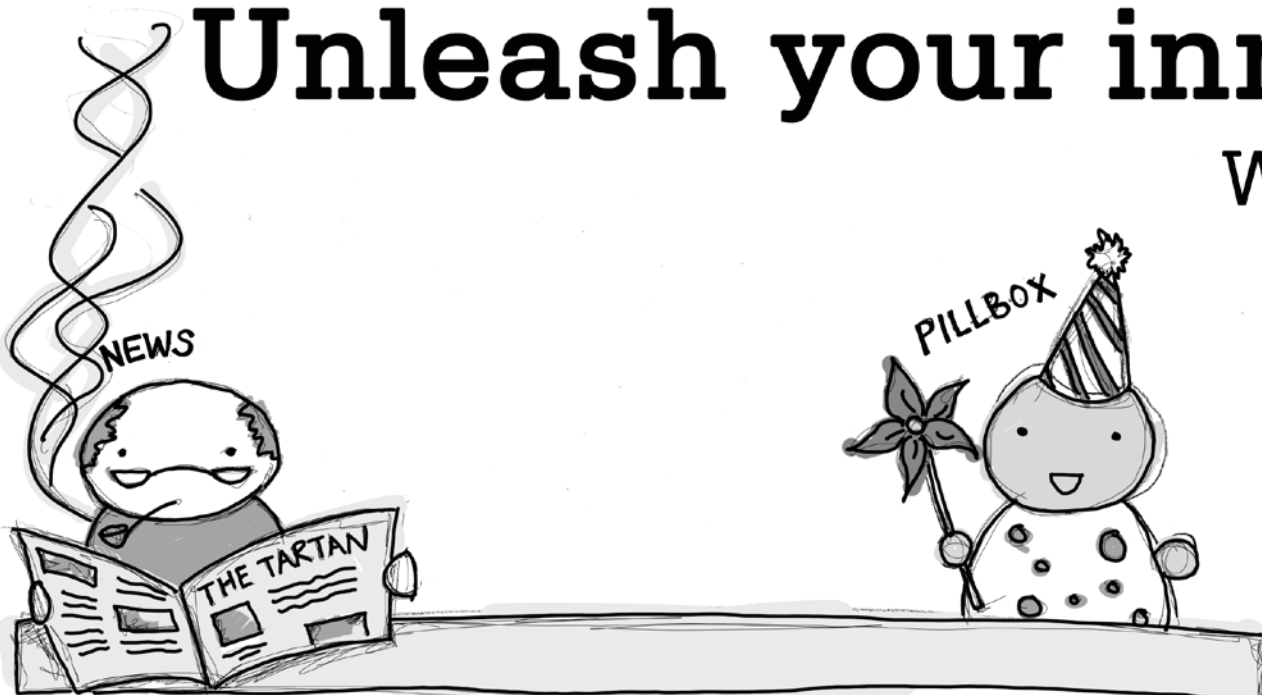
The 13 Most Wanted Men. The Andy Warhol Museum. Through Jan. 4.

This exhibit explores a controversy Warhol ignited at the 1964 New York World's Fair, when he expanded and displayed mug shots from NYPD records of the 13 most wanted men of 1962. Admission to the museum is free with a Carnegie Mellon student ID.

Compiled by **Joey Peiser** | Pillbox Editor

Want your event here?

Email calendar@thetartan.org.



Unleash your inner child

Write for Pillbox

pillbox@thetartan.org

eastend mile.



Kevin Zheng | Staff Photographer

Top: On Tuesday, Eastend Mile, a jazz/indie fusion band based in Pittsburgh performed in the Underground as a part of the AB Concerts series. **Bottom left:** Roger Romero, band co-founder, wailed on the saxophone. **Bottom right:** Guitarist Drew Santa slammed a solo.

