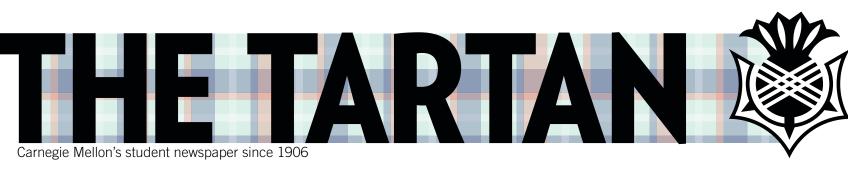
Soccer teams fall in NCAA tournament · A10

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School of Drama puts on hilarious production · B8

PILLBOX



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Investiture ceremony ushers in Suresh as ninth president

News Co-Editor

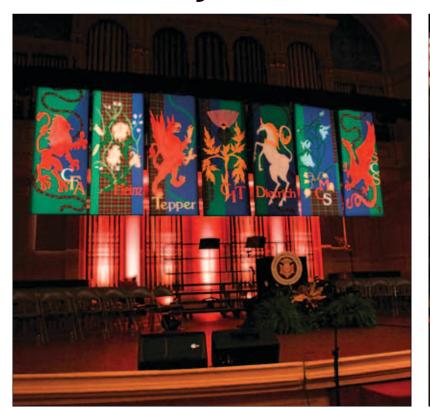
Carnegie Mellon officially welcomed Subra Suresh as the university's ninth president last Friday. Following a campus-wide celebration on-Thursday, Suresh's investiture ceremony was hosted at Carnegie Music Hall.

The event took place on the day of the 113th anniversary of Andrew Carnegie's proposal to create what would eventually become Carnegie Mellon University.

Suresh has officially been Carnegie Mellon's president since July 1. Previously, Suresh was director of the National Science Foundation from 2010-13. Before that, he was the dean and Vannevar Bush professor of engineering at the Massachusetts Institute of Technology (MIT).

In Suresh's speech, he compared his own journey as an immigrant to Andrew Carnegie's. "In 1838, a 13-year-old boy and his family left their home in Scotland, crossing boundaries — and a very large ocean — to settle in the North of Pittsburgh. That journey transformed his life, and the lives of countless others around the world."

Suresh, like Carnegie, made the journey to the United States to make an impact. "I'm



President Suresh spoke during the investiture ceremony, which took place in Carnegie Music Hall last Friday.

here because of the vision and courage of a mother who herself was not lucky enough to go beyond high school. Still, she encouraged me to cross many boundaries, knowing all the risks and personal sacrifices she would have to endure, and knowing full well that my iourney would transform my life and hers forever," Suresh

"36 years ago, I crossed many national boundaries and several large oceans with a partially filled suitcase, less than \$100 in my pocket, and a one-way airline ticket, purchased with a loan, to begin a new life that would eventually bring me here," Suresh said, describing his journey as an immigrant to America.

Suresh's comparison to

Andrew Carnegie resonated with students. "I liked that he compared himself to Andrew Carnegie as an immigrant," said Julia Eddy, a sophomore electrical and computer engineering major.

Other students were inspired as soon as they heard the characteristic sound of the Carnegie Pipes and Drums open the ceremony.

"It was exciting; every time I come to these events I always get really emotional, just proud to be at this school. I hear the bagpipes and I start tearing up, like 'wow, this is so great," said Siriana Abboud, a sophomore French and psy-

Michelle Wan/Staff Photograp

chology double major. The Carnegie Pipes and Drums were followed by the national anthem and a special

performance by Carnegie Mellon alumna Patina Miller (CFA

Miller, who is currently the star of the Broadway revival of Pippin and slated to be in The Hunger Games: Mockingjay - Part 1 and Part 2, sang Stephen Schwartz's (CFA '68) "Corner of the Sky."

Raymond Lane, chairman of the Carnegie Mellon Board of Trustees, welcomed the packed music hall and hosted much of the ceremony.

The investiture included remarks and speeches from many prominent Carnegie Mellon staff members and alumni, including Carnegie Mellon's longest-serving active faculty member, Allan Meltzer, the Allan H. Meltzer university professor of political economy.

Meltzer has served on Carnegie Mellon's staff for 57 years, and has been here for five of the eight presidents before Suresh.

'Carnegie Mellon succeeded in moving from a good regional school to a major worldclass university," Meltzer said. "Let me assure you, that is an extremely rare achievement. Leland Stanford University comes to mind as another example, but they've had the benefit of oodles of substantial

See INAUGURATION, A3

_ack of sleep hurts student health

BRENT HEARD

Senior Staffwriter

Almost every Carnegie Mellon student struggles with

However, in general, most university students have a reputation of being particucomplaining about their rela- ducted a survey to determine ated and distributed an on-

tive tiredness and comparing all-nighters. A 2009 study published in the Journal of Adolescent Health found that more than 60 percent of college students demonstrate disturbed sleep-wake patterns and 20 percent reported pulling an all-nighter at least once per month. The Tartan con-

the true amount of sleep that students were receiving, and their perceptions of the effects sleep has on their academic performance, as well as physical and mental well-being.

In order to get a sense of college students' sleep habits, as well as its perceived and

line survey. There were 102 respondents, all of whom had registered college email addresses, and 54 of whom attended Carnegie Mellon.

Fifty-one percent of respondents reported sleeping between five and six hours on weeknights (defined as Sun-

See SLEEP, A3

REASONS FOR GIVING UP SLEEP WEEKNIGHTS 73 OUT OF 102 STUDENTS SAID THAT THEY FELT THEY PERFORMED INADEQUATELY ON AN ASSIGNMENT OR EXAM DUE TO ACK OF SLEEP

CulinArt employees agree on new contract

CHRIS GALVIN

Junior Staffwriter

After nearly four months of bargaining, food service contractor CulinArt Inc. and 32BJ Service Employees International Union (SEIU), the union representing Carnegie Mellon's food service workers, have come to an agreement on a new contract.

The new three-year contract extends from October 2013 to Sept. 30, 2016. It includes wages 12-14 percent higher than the original employee wage of \$10.30 per hour, as well as a more

lenient disciplinary policy, which shortens the length of time an employee can be penalized for an incident.

Hermaine Delaney, SEIU Western Pennsylvania director, said the bargaining process was "touch and go, kind of difficult at moments. Once [we] start getting into the economic part of the contract, it gets kind of sticky."

"The process was an atmosphere of respect and good-faith negotiations," said Michael Pitkewicz, vice president of Human Resources at CulinArt. "We have a collective bargaining agreement in

place and I believe we're all happy with that."

"They used to hold stuff over our heads for three years and now after 12 months they have to take it out of our file," said Kim Squirrel, head vegan and vegetarian chef at Carnegie Mellon. "That got a lot of employees to be terminated for stuff that had happened three years ago."

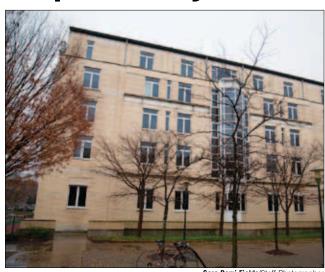
The union's main goal was to raise the minimum wage of CulinArt employees. "[CulinArt] has a two-tier wage system, where people who were hired at a certain date make two dollars or so an

hour more than people who were hired after that particular date.... A majority of people who work at CulinArt, they're in that lower tier," Delaney said. "Our mission was to try and close that gap, and we succeeded in making it a smaller gap for next time when they bargain... it will be easier to close it."

The settlement also fell short concerning health care. "Emergency visits went from \$50 co-pays to \$150 co-pays," Squirrel said. "I'm not happy about that at all. I think they

See CONTRACT, A3

West Wing housing displaced by CPDC



Sara Remi Fields/Staff Photographe

The Career Center will expand into the second floor of West Wing.

ALVIN MATHEW

Staffwriter

The university has drafted plans to move the Career and Professional Development Center (CPDC), currently in the basement of the University Center, to West Wing. The change has sparked strong reactions among students.

Gina Casalegno, dean of Student Affairs, said that space played a major factor in the decision. "The current CPDC footprint in the lower level of the University Center is unable to accommodate the growing demand from employers who want to come to campus to recruit top CMU talent," she said. "A move to the second floor of West Wing allows us to maintain a strong on-campus recruiting program in the central location of the UC while maintaining space to support our one-to-one engagement with students as they explore their career development."

Casalegno explained that the new expansion to the career center will allow students and organizations to use the space when not occupied for recruiting purposes. "While the current CPDC footprint will be dedicated to employer engagement with students by day, this expansion allows for us to explore a flipped-space model where we can open the center in the

evenings and on weekends to student organizations, studygroup sessions and other opportunities to support the student experience."

The move comes with support from student government. "Last year when I proposed to student government the possibility of creating a win-win scenario for students in reconfiguring these spaces, they were very supportive of this expanded set of opportunities to serve student

needs," Casalegno said. Nevertheless, many students are disappointed that potential rooms will be eliminated from the highly soughtafter West Wing space. Others are concerned that they will no longer be able to retain their West Wing rooms when the career center is officially moved to the space.

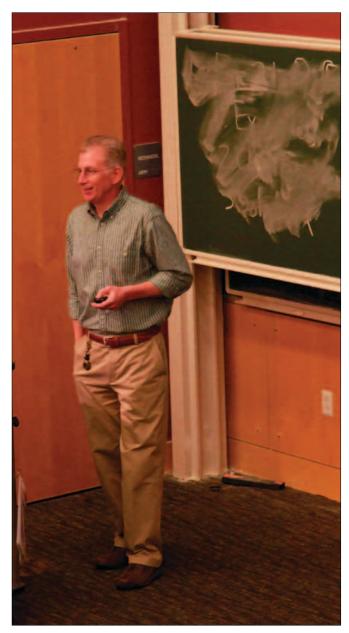
Sophomore design major Solomon Ng, a resident of West Wing, said, "I think it's nice that they're trying to expand this facility that CMU has to offer, but I think there are so many other places they can do it. Not a residential area, because this is a place where students live and call home. So when you displace a large number of students, where could they stay that would be more convenient than West Wing or Resnik?"

"Unless they are planning

See CAREER, A3

Carl Sagan Fest celebrates astrophysicist







Dennis Trumble (top, bottom left), author of "The Way of Science," spoke as part of the Carl Sagan Fest, which included apple pie, pizza, stargazing, and a documentary screening. Andy Norman (bottom right), adjunct professor of philosophy, also spoke at the event as part of the American Humanist Association, which hosted the event.

Campus Crime & Incident Reports

Alcohol Amnesty

November 9, 2013

University Police and CMU EMS responded to Beeler Street and Olympia Place in response to an intoxicated student. The student, who had been drinking on Wilkins Avenue, was taken to a hospital by city medics. University Police later responded to Webster Hall with CMU EMS and city medics, where another male was taken to a hospital. University Police and CMU EMS, along with city medics, also handled a medical incident at 1057 Morewood Ave. involving an intoxicated male. All of these incidents met the criteria for Alcohol Amnesty.

Bicycle Theft

November 11, 2013

University Police were summoned to Woodlawn Apartments in response to a theft report. The student stated that her bicycle, which was secured using a cable lock to a city of Pittsburgh "No Parking" sign, was removed from the sign. The victim stated that she secured the bicycle at 10 p.m. on Nov. 10 and realized her bicycle was gone on Nov. 11 at midnight. University Police determined that the Pittsburgh Police did not remove the bicycle, since other bicycles were secured to nearby signs. Reminder: Please use designated bike racks to secure bicycles.

Purse Theft

November 11, 2013

University Police were summoned to 311 South Craig Street in reference to the theft of a staff member's purse from her desk drawer. The female believes that someone stole her purse from her desk drawer between 10 a.m. and 11 a.m. This investigation is ongoing.

Underage Drinking

November 14, 2013

University Police were dispatched to reports of "a female struggling to walk" at the intersection of Forbes and Morewood Avenues. University Police discovered the female was underage and intoxicated. CMU EMS and city

medics were summoned to the scene to render medical aid. The female was taken to a and cited for underage drinking.

Kitchen Fire

November 14, 2013

University Police, along with the Pittsburgh Bureau of Fire, responded to the second floor of the University Center in response to a small kitchen fire. The fire was put out by several employees using fire extinguishers. The cause of the fire was confirmed to be a kitchen dishwasher.

NEWS IN BRIEF

David Tepper donates gift of \$67 million to CMU

Carnegie Mellon trustee and founder of Appaloosa Management David Tepper (GSIA '82) donated a gift of \$67 million to Carnegie Mellon's Tepper School of Business. Tepper's generous donation, in combination with his original gift, which he pledged nine years ago, totals to over \$125 million.

Tepper's gift will go directly toward the creation of the David A. Tepper Quadrangle, which will be located north of Forbes Avenue and stretching into Oakland. The Tepper Quadrangle will include a new, 300,000-square-foot building for the Tepper School of Business as well as a new welcome center.

According to President Suresh in an email to the Carnegie Mellon community, the Quad will be a new university gateway and interactive hub that will further enhance and strengthen collaboration among all of Carnegie Mellon's schools and colleges. The university hopes to encourage more interdisciplinary collaboration through the construction of this new Tepper building, which they hope will "integrate the rich heritage of innovation, collaboration, and entrepreneurship from all parts of CMU" through the creation of new integrated degree programs.

"The 15th of November

marks the 113th Anniversary of the proposal made by Andrew Carnegie in 1900 to the Mayor of Pittsburgh to create a new school that is now known all over the world as Carnegie Mellon University," Suresh wrote. "As you may know, this week's presidential inauguration will take place at the Carnegie Music Hall, which is just across the street from where Andrew Carnegie announced his gift to create our university. One hundred and thirteen years later exactly, on Nov. 15, another extraordinary philanthropist of our era, David Tepper, is having a profound impact on Carnegie Mellon by demonstrating his loyalty to his home institution through this new gift."

"On behalf of the CMU community, I wish to express my profound gratitude to David for his remarkable demonstration of generosity and for his belief in the growing potential of CMU," he continued.

"Carnegie Mellon tied everything together for me and gave me a great foundation," Tepper said in an interview with *The New York Times.* "My earlier gifts were a payback to the university, and this is a continuation of

> Compiled by NOËL UM

WEATHER







TUESDAY

High / Low 43/30

WEDNESDAY **THURSDAY** High / Low High / Low 50/34 50/39





FRIDAY High / Low 48 / 41

SATURDAY

High / Low 44/34

High / Low

39 / 31

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

Announcements

Andrew Schwartz, finance committee chair and junior information systems major, met with Lieutenant Joseph Meyers of the Carnegie Mellon University Police last Friday to discuss changes to the Carnegie Mellon shuttle system website and mobile application.

Points of Discussion

Senate is looking for a venue for its annual Christmas party; volunteers are asked to contact Wyatt D'Emilia, senior psychology major and chair of the Internal Development Committee.

Health Services is seeking student feedback to help make changes to its health insurance guidelines.

Vacancy Elections

There were vacancy elections for two empty Senate seats in the School of Computer Science and one in Dietrich College. Gail Wil son, sophomore computer science major, and Aaron Gutierrez, first-year computer science major, ran for the seats. Both Wilson and Gutierrez were

elected as Senators. Steven Wang, sophomore decision science major; Brad Wyatt, sophomore international relations and politics major; and Vaasavi Unnava, first-year economics major, ran for the Dietrich College seat. Wang was elected as Senator. Wang's speech was focused on a desire to improve Carnegie Mellon campus life by listening to students' concerns.

Committee Update: Internal Affairs, Campus Life

The Internal Affairs Committee is currently working on creating a Senate Wiki. Although the website is up and running, it lacks significant

content. The Campus Life Committee reiterated that it is hosting a gallery crawl this Saturday. The Gallery Crawl will visit venues such as the Mattress Factory, Andy Warhol Museum, and the National Aviary. Buses will be leaving periodically throughout the day from 11 a.m.-5 p.m. on Saturday. Campus Life is also working on designs for Senate T-shirts and other materials for sale. The committee plans to put up a Christmas tree somewhere on campus, as well as hand out holiday cookies.

> Compiled by **BRIAN TRIMBOLI**

Student and alumni performances celebrate Suresh

INAUGURATION, from A1

boodle - we did not."

Meltzer's remarks were followed by a poetry reading by Jim Daniels, the Thomas Stockham Baker professor of

Suresh was then welcomed by representatives from all parts of Carnegie Mellon, including Antoinette Ungaretti (MMCC '70), president of the Carnegie Mellon Alumni Association and trustee: Roberta Klatzky, the Charles J. Queenan Jr. professor of psychology and chair of the Faculty Senate; and John Lanyon, chair of staff council.

The student body was also represented in the ceremony: Lindsay MacGillivray, senior biology major and student body president; Lukas Ronner, Student Senate chair; and Patrick Foley, chair of the Graduate Student Assembly, all gave

Many lauded Suresh's outreach to the Carnegie Mellon community.

"It was gratifying that the first communication we got from him last year was 'Oh, I'm going on a listening tour.' It started his presidency on a good note to say that he understood that he didn't know everything about this school, because not everybody does, but when you come into a position like [president], it's easy to think that you might," said third-year architecture major Nikhil Sambamurthy.

Ungaretti also praised Suresh's listening tour. "Your first 100 days inured you to our alumni. You included us as one of the first stops on your listening tour, and you



Carnegie Mellon's Bhangra team put on an exhibition during the Inauguration ceremony.

embraced us as an important constituency of CMU."

The keynote speaker was introduced by John Holdren, director of the White House Office of Science and Technology Policy. Holdren said that Suresh "combines an enormous creativity, an enormous production of potential ideas to be implemented, with the capacity to figure out which ones can in fact be implemented and how he can go about implementing them."

Eric Schmidt, executive chairman of Google, gave the keynote speech. Schmidt noted that Carnegie Mellon has been a home for innovation and entrepreneurship since it pioneered the field of computer science in the 1960s. "It was a mythical place of achievement; the labs here were not

just for experiments and research, they were where the future was dreamed up and created," Schmidt said.

Schmidt, too, made a note of Suresh's immigrant past. "What's interesting about our energetic new leader is that he is also a testament to why we need to have an open country, to get extraordinarily brilliant people to come into our country to change our country and build our future."

The ceremony closed with performance by the Carnegie Mellon concert choir and the Carnegie Pipes and Drums.

The choir performed "The Oak," a piece by professor of composition Nancy Galbraith adapted from the poem of the same name by Alfred Lord Tennyson.

The ceremony left students impressed. Evan Wineland, a sophomore electrical and computer engineering major, summed up the mood of the investiture. "I think it was one of the most inspirational moments of my time here at CMU. I think anybody who is not beaming with Tartan pride right now is doing it wrong."

Suresh received his undergraduate degree at the Indian Institute of Technology in Madras before coming to Iowa State University for his master of science and then receiving his doctorate from MIT.

Suresh is also one of only 16 living Americans to be elected to the U.S. National Academy of Engineering, the National Academy of Sciences, and the Institute of Medicine.

Career center expands

CAREER, from A1

on expanding West Wing to a larger building, it is doing more harm than good because so many people have to figure out other places to live and it becomes a big hassle for the students and when you take up an entire floor, you take out the kitchen, and West Wing only has two kitchens," Ng continued.

"Choosing to do it in a dorm is probably not the best of ideas. Because it's a dorm you also have to consider who's coming in and out, swiping cards. Therefore, security and safety comes into question as well," he said.

Casalegno feels confident in solving this problem. "We have worked with Housing Services, the Student Dormitory Council, the West Wing staff and students to ensure that students who currently live on the second floor of West Wing will be accommodated to retain like spaces in West Wing or Resnik next year if that is their desire. We are also looking to other options in the current housing stock to renovate that we believe will be very attractive to the student body, mitigating this loss in West Wing."

Patina Miller (CFA '06) performed "Corner of the Sky."

Project Smile and Happiness Room to boost student health

SLEEP, from A1

day through Thursday) while 41 percent reported sleeping between seven and eight hours during that time frame.

On weekends, students appear to be catching up on their sleep, with 47 percent of responses reporting seven to eight hours of sleep, and 32 percent getting over nine hours of rest.

In terms of academic effects, 72 percent of students responded that they felt they had performed poorly on an exam or assignment because of inadequate sleep.

In terms of what students are giving up their sleep for, however, the results were mixed. Sixty-seven percent of respondents reported giving up sleep to socialize, 87 percent reported forgoing sleep to finish homework, and 58 percent reported giving up sleep to study for an exam. Additionally, 62 percent of students reported giving up sleep because of procrastination.

In line with these responses, 63 percent of students reported getting less sleep than they think they need, 86 percent of these respondents believed that it is having a negative effect on their physical health, and 87 percent believed it is having a negative

effect on their mental health. Respondents ranked the importance of sleep on their physical health on a scale of one to five, ranging from not very important to very imporant. The effects of sleep on physical health average 4.31, while the effects of sleep on mental health average 4.36.

The health effects tied to poor and disrupted sleep habits can be quite striking.

As documented by Web-MD, chronic sleep loss and sleep disorders increase the risk of serious health ailments such as heart disease, high blood pressure, stroke, and diabetes, among other issues. Additionally, sleep plays an important part in cognitive functions.

Lack of sleep can upset one's alertness, concentration, reasoning, and problemsolving abilities. Sleep also plays a key role in consolidating memories. For a student, these effects from sleep deprivation can prove quite challenging.

Kurt Kumler, director of Counseling and Psychological Services (CAPS) at Carnegie Mellon, spoke in detail on sleep's effects for college

"We've always had this notion that sleep is a biological process of restoration ... but we also know sleep is pretty complicated, consolidating memories and aiding certain types of problem solving," he

Kumler added that while it has not been fully established in medical research, "during certain stages of sleep, our brains are purging certain byproducts of the brain using energy during the day, like cleaning out the clogged

Sleep is inevitably tied to

The health effects tied to poor and disrupted sleep habits can be quite striking.

students' academic performance and overall well-being. Carnegie Mellon's stress culture has been frequently discussed in the public setting since fall 2012. In January 2013, Dean of Student Affairs Gina Casalegno, Vice Provost for Education Amy Burkert, and Student Body Vice President Meela Dudley hosted a town hall regarding campus stress and welfare.

Kumler added that a lack of sleep gives students "a harder time remembering things we learned the day before, leaving us not as well equipped to solve complicated problems."

Some groups are trying to improve this culture on campus. Project Smile is a student-led group aiming to improve the student atmosphere at Carnegie Mellon. Their past projects include sending dinosaur-shaped chocolates with messages on behalf of students at no cost.

Sophomore chemical engineering major Angela Ng and first-year undeclared Dietrich student Elani Gitterman are two members of Project

Ng said that the goal of

Project Smile "is to make people understand how to relax. I think the stress culture gets to people," she said. "We want to show that they don't have to have bad weeks every week."

Gitterman said that she ioined Project Smile because she "liked the idea of making people happy. You can do something nice for someone else without it costing anything."

Outside of Project Smile, Ng is using a student grant awarded by Student Affairs for enhancing campus culture to build a "Happiness Room" in the West Wing dormitory.

Ng described the Happiness Room as "a place with no technology, no homework, and a lot of comfy chairs." She added that the room will have whiteboard walls and a lending library where people will be encouraged to donate books and write messages in them. With respect to student well-being, Kumler said, "Yes, there are a lot of students at CAPS who are struggling with sleep," adding that "stress, mental health, and sleep are all intertwined."

When asked what advice he'd provide to students wishing to balance multiple tasks at Carnegie Mellon, Kumler responded, "You can't do everything. The best we can do is be informed about everything," adding that everyone has a limited amount of time.

Sleep poses a national issue for most college students. Roxanne Prichard, a co-author of the Journal of Adolescent Health study, told Medical News Today, "Students underestimate the importance of sleep in their daily lives. They forgo sleep during periods of stress, not realizing that they are sabotaging their physical and mental health."

An article published by Harvard Medical School discusses the role of sleep in determining mental health outcomes, writing that those with chronic insomnia have an increased risk of developing mood disorders such as depression or anxiety.

It went on to cite a University of Pennsylvania study that limited its participants to only 4.5 hours of sleep each night for a week, in which subjects reported "feeling more stressed, angry, sad, and mentally exhausted."

CulinArt employees satisfied with deal, thankful to union

CONTRACT, from A1

screwed us over on the insur-

Pitkewicz defended this choice in health care and said, "Employee health care is reviewed every year and CulinArt looks for the best possible plan that we can offer to our employees."

"I think their health care is going to be an issue, at some point, where we try to get them affordable health care where the members aren i paying so much out of pocket," Delaney said. "But that's a fight for another time."

However, the CulinArt employees still seem to be happy with the settlement. "Based on the vote, I think [the CulinArt employees] are satisfied." Delanev said. "We pretty much got everything

we asked for. It's better than the last settlement that we got; this one is way better," Squirrel said.

CulinArt employees also expressed great appreciation for their union. "I love SEIU; they are the best. They fight for us, they fight for our rights. If it had not been for SEIU, we wouldn't have got what we got. There's no doubt in my mind that [CulinArt] would not have given made some of the concesrel said. "I love my union. My union rocks."

CulinArt is also satisfied with the settlement and glad a solution was reached. "I'm very happy [with the settlement]. My personal opinion is that all of the negotiations were handled in good faith and we worked out a contract that we all shook hands upon, which is a great thing," Pitkewicz said.

"We are happy to have reached an agreement that will benefit the workers and the CMU community alike," Delanev said. "As the cost of living continues to rise, hardworking CMU food service workers deserve a raise so that they can support their families."

The CulinArt employees us the wage increases or even are also thankful for the support from the Carnegie Mellon community throughout the past months' bargaining. "We appreciate the outpouring of support from faculty, students, parents, and even members of the football team," said CulinArt employee Gina Stanton, who is a cook at the Resnik Servery. "The CMU community support means a lot to all of us."



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

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

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

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

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

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

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

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

Application Deadline: March 1, 2014 (Applications may be accepted after the deadline until all positions are filled.) A4 « thetartan.org/scitech The Tartan » November 18, 2013

Science & Technology

Lecturers discuss future of energy and climate change

JENNIFER GOLDA

Staffwriter

Climate and energy experts from across the country gathered to participate in a symposium last Friday in McConomy Auditorium. The panel discussed "Opportunities and Challenges in Energy and Climate" as part of the weeklong celebration for the inauguration of President Subra

The conversation included thoughts from John Holdren from the White House Office of Science and Technology Policy and Science magazine editor-in-chief Marcia McNutt. Representing Carnegie Mellon research and perspective was Peter Adams, a civil engineering and engineering and public policy professor; Inês Lima Azevedo, an engineering and public policy assistant professor and co-principal investigator and co-director of the Climate and Energy Decision Making Center; Erica Cochran, assistant professor in the school of architecture and UDream program coordinator and Carnegie Mellon Ph.D. candidate; and Khee Poh Lam, a professor in the school of architecture. The discussion began after opening remarks by President Suresh and was moderated by Raymond J. Lane, a life trustee and chairman of Carnegie Mellon's Board of Trustees.

Topics included President Obama's Climate Action Plan and the need for national policy to consider both mitigation and adaptation in its strategy, as well as the use of adopting renewable energies to satisfy the global energy demand. The panelists from Carnegie Mellon presented research on many areas of climate and

energy problems: the effects but the hard part is the people of different types of air pollution on atmospheric cooling and heating; decision making and the implications of policy goals in determining the best location for renewable energy installations; an investigation of energy use in urban schools and its impact on education; and new efforts in Chinese urban planning to create greener cities.

Each topic demonstrated an aspect of the Inauguration's theme "Crossing Boundaries, Transforming Lives," which aims to make people consider "how crossing geographic, disciplinary and technological boundaries will accelerate innovation in education and research to help address the world's most pressing challenges," according to the inauguration website. This symposium addressed one of these challenges — climate change and the need for clean energy solutions — and emphasized the role that universities can play.

President Suresh expressed in his opening remarks that Carnegie Mellon's ability to coordinate policy, technology, and education and its location in Pittsburgh — one of the United States' clean energy leaders — provides valuable advantages to produce answers to climate change and energy. Cochran also mentioned during her presentation that, "At Carnegie Mellon, not only do we like to come up with solutions — we like to share them."

The symposium addressed that the major problems about sharing solutions is not the lack of technological innovation, but also the ability to bring the solutions to the

and the policy," McNutt said. "That's why I think the program at Carnegie Mellon is so valuable because it addresses issues like that. Not only do they pursue technology solutions, but the Scott Institute for Energy Innovation and Steinbrenner Institute for Environmental Education and Research here at CMU also strives to provide resolutions for technology policy."

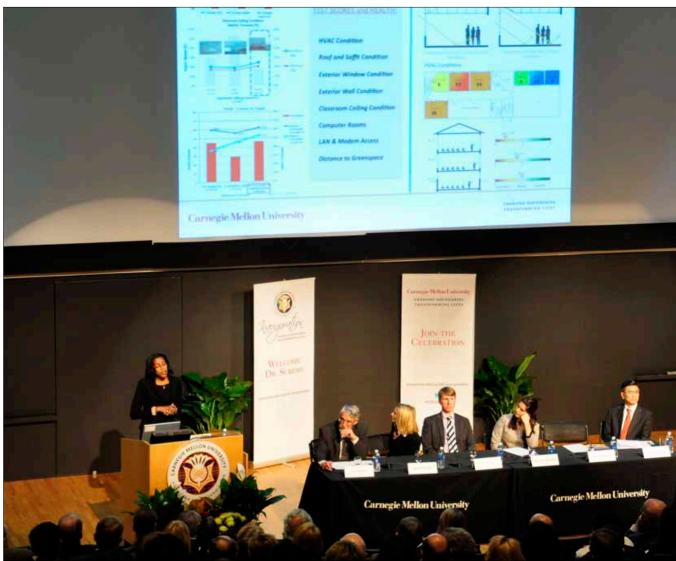
Tackling the climate change and renewable energy challenge is not just an administrative goal — students are interested as well. A graduate student poster session outside the symposium demonstrated an array of research on the topic.

Michael Oden, a sophomore in civil and environmental engineering who attended the symposium, said he was attracted to the talks because his interest in the university's future plans.

"I don't think that they're doing too much right now, but they're trying to. Like they are building the new Scott Hall," he said. "I think we have the deparments to do it."

Scott Hall, cited by President Suresh in his opening remarks as another key advantage in Carnegie Mellon's energy strategy, will be the

of his passion for the topic and newest academic building on campus and will house the Scott Institute for Energy Innovation. According to its website, the Scott Institute aims to establish an interdisciplinary center for "creating innovations in energy technologies, regulations, and policies." More importantly, the new building may also give university energy efforts a much-needed visible presence on campus.



"The technology is there, Erica Cochran, an assistant professor in the school of architecture, talks about the role of buildings in climate change and energy consumption.

Electric cars may become new norm

CLAIRE GIANAKAS Staffwriter

Energy — particularly renewable energy — plays a large factor in many aspects of today's society and has increased public interest in energy-conserving products such as electric vehicles (EVs). However, despite the increase in EV usage, recent findings by Carnegie Mellon researchers suggest that the large-scale success of EVs is limited by a lack of residential parking.

Elizabeth J. Traut, a mechanical engineering doctoral student; Tsu-Wei Charlie Cherng, who recently received his master's degree in mechanical engineering; Chris Hendrickson, a civil and environmental engineering professor; and Jeremy J. Michalek, a professor of mechanical engineering and public policy, examined the availability of parking and charging for EVs in the United States.

The term EV encompasses plug-in hybrid electric vehicles (PHEVs), which run on gasoline and electricity, and battery electric vehicles (BEVs), which run solely on electricity. Currently, EV sales make up less than 0.6 percent of total car sales.

"There are a number of reasons why there's interest in EVs," Hendrickson said. "First, there are the energy security issues. Most motor vehicles run off of petroleum, and there are issues with supply security and imports. Second, if we move toward renewable power and the power grid system, then we can reduce greenhouse gas emissions."

Hendrickson explained that their research stemmed from the idea that most people would only buy EVs if they could charge their EV at home. The goal of the research was to look at the availability of charging at home for EVs from a vehicle perspective instead of a housing perspective. Previous research on charging availcharged. This research deterdesignated parking spot.

"We were interested in looking at it from the vehicle perspective," Hendrickson said. "It turns out that those residences that have a dedicated parking spot often have multiple vehicles and only have one parking spot."

Ultimately, through the combination of data from the Residential Energy Consumption Survey and the American Housing Survey, the researchers found that approximately 25 percent of vehicles have access to reasonable home charging. "This is good news and bad news," Hendrickson explained. "It's good news because people can buy EVs up to that 25 percent level. It's bad news because after that 25 percent level owners of EVs are going to have to make changes to ensure that parking is available."

Some recent predictions

ability was based on whether for EV adoption suggest that are indefinite for a number a household had a potential the number of EV owners will spot where an EV could be greatly increase in the near future. The Electric Power mined that approximately 50 Research Institute (EPRI) percent of households had a claims that PHEV sales could and rental properties where be as high as 80 percent by 2050. The research on parking and charging availability, however, says that parking infrastructure will have to be developed in order for EVs to cross the 25 percent level.

> The research also touched upon the implications of parking and charging availability in urban areas compared to rural areas. It was found that charging availability was lower in urban areas than in rural areas, meaning that the challenges of EV adoption will be more severe in urban locations. The study also concludes that public charging infrastructure, although not easily instigated, will be necessary if EVs are to be adopted in urban areas.

> Despite promising results, Hendrickson admits that there are still many factors that the research did not take into account. "The numbers

of reasons," Hendrickson said. "There are rental properties where owners might not permit charging stations you have common garages with electricity paid for by the owner."

Hendrickson also explains that many households have garages full of belongings other than cars. These garages were considered viable charging options in the research, even though in reality they are not. Finally, Hendrickson

mentions the issue of safety. "It's more attractive to charge an EV in a garage where you are protected from the rain and everything else and there are no safety issues, than sitting the EV in a driveway to charge," he said.

Renewable energy and EVs are crucial for a future with better energy security and a cleaner environment. This research has provided information on the obstacles that must be overcome in order to better incorporate EVs into modern society.

SCITECH BRIEFS

Prosthetics model limb movement

Researchers at Vanderbilt University have made it possible to develop lower limb supercomputers, showcased prosthetics that can duplicate the natural movement of human legs. The leg is made of lightweight materials, such as lithium ion batteries, low-power computer chips, miniaturized sensors, and electric motors with rareearth magnets. The motors function as muscles and the sensors function as nerves. At present, researchers are focusing on developing some way of connecting the device to the user's central nervous system, so the device can identify the user's intent to change movements. Methods being examined include implanting electrodes into a patient's peripheral nerves or brain. These devices will enable users to exert less hip effort, decreasing the risk of falling.

Source: The New York Times

Music lessons may improve cognition

According to a study conducted at Northwestern University, music lessons can lead to better cognitive processing, with effects that can last long after the musical training ends. The study examined 44 adults aged 55-76. Researchers monitored electrical activity in the part of the brain that processes sound and found that participants with 4-14 years of musical training had relatively faster responses to speech. None of the participants with musical training had played an instrument for more than 14 years. According to the researchers, these results highlight the necessity of music education for today's youth.

Source: The New York Times

IBM's Watson available on web

Two years ago, Watson, one of IBM's most powerful its ability to beat any human on the game show Jeopardy!. This week, IBM announced that Watson will be available through the Internet in a twice-as-powerful form. Companies, academic institutions, and individual software developers will be able to use the system at a fraction of the cost, and draw on its specialties to develop artificial intelligence machines. IBM's move is part of a rising trend of large corporations moving to make powerful, million-dollar systems as accessible as any common application. Experts agree that this trend marks a technological milestone, both in the way humans and machines interact and in the level of technology available to the people.

Source: The New York Times

NASA releases photos of Saturn

On Tuesday, NASA released a photograph of Saturn and the entire inner solar system taken by the Cassini Spacecraft. The photo was taken on July 19, and shows Saturn and the 405,000 miles surrounding it. It was assembled from 141 wideangled images captured over the course of four hours. Perhaps one of the most striking features of the photograph was Enceladus, Saturn's sixth largest moon. This moon was seen emitting sprays of mist, which astronomers believe may contain the best evidence, in our solar system, of life beyond our planet.

Source: *The New York Times*

Compiled By SONIA KATHARANI-KHAN



Engineers recently assessed the possibility of widespread usage of electronic vehicles in America.

Researchers use inkblots to make safer passwords

BROOKE KUEI

Assistant SciTech Editor

Have you ever looked up at the sky and thought that a passing cloud looked like a spaceship or a cat, or maybe even a knight riding a horse off into battle? Often, inkblots have the same effect. Carnegie Mellon computer science graduate student Jeremiah Blocki and his advisors Manuel Blum, the Bruce Nelson professor of computer science, and Anupam Datta, associate professor in the computer science and electrical and computer engineering departments, have developed a new password security system that uses inkblots as a second line of defense to prevent hackers from discovering lists of passwords.

This password system is creatively named GOTCHA, which stands for Generating panOptic Turing Tests to Tell Computers and Humans Apart. "The key word to focus on here is 'panoptic,'" Blocki said. "Panopticon refers to specific architectural structure. You could think of a prison, for example, where the guards want to be able to monitor all of the prisoners without walking around. The basic architectural layout is this curved prison with the guard in the center, where he can look into any of the prison cells at any time. Basically, 'panoptic' refers to a world without privacy.'

The basics of password security is that when an individual creates a username and a password, the server will store that username along with a cryptographic hash of the password. When the user signs on at a later time and types in his or her password, the server will check if the hash of the given password matches the saved hash.

The problem is that this system proves unsafe in a situ-

ation where a hacker has already breached the server and can see the saved hashes of the passwords. "The thing about the hash function is that if an adversary guesses your password, then it's very easy to compute the hash and match

> Another key point that makes GOTCHA so effective is that in order to match inkblots to their correct labels, an adversary would have to have a human's help, which is more expensive than having a computer continuously try

> against what's on the file. So it is very easy to verify guesses," Datta said. Unfortunately, many people pick very simple passwords, such as "12345," which has led to entire lists of passwords at companies such as Sony, Gawker, LinkedIn, Zappos, and Adobe to be compromised.

GOTCHA works differently. When a user creates an account, after they give their username and password to the server, it will give the user 10 randomly generated inkblots. The user must then assign labels to each of these inkblots, describing the pictures that they make with phrases such as "evil clown" or "a smiling Ms. Frizzle.'

"What the server now stores," Blocki explained, "is not just the hash of the password, but the hash of the password with a permutation appended to it." Each time the user wants to sign in now, he must enter the username and password and then successfully match the inkblots to their descriptions.

"So let's say that the user has 10 inkblots. Then there are 10 factorial ways to match these labels to the inkblots. Now, an adversary that wants to use a brute force attack must simultaneously guess the password and the permutation. So essentially what we're doing here is we're expanding the amount of effort that an adversary needs to use to attack a password by a factor of about 3.5 million," Blocki said.

guesses.

To test if users could reliably remember their inkblot descriptions, 70 people were hired through Mechanical

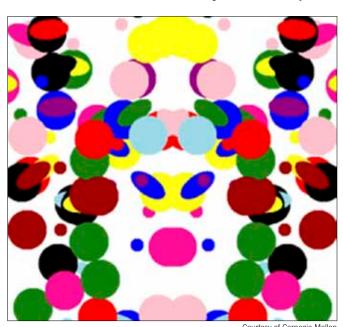


Turk, a crowdsourcing Internet marketplace that uses human intelligence to complete tasks, and were asked to describe 10 inkblots with interesting labels. Ten days later, they were asked to match these labels with the inkblots. The study showed that of the 58 individuals who participated in the second part, onethird matched all of their inkblots correctly and more than two-thirds got half right.

Blocki stated that a similar study would probably be conducted again with adjusted financial incentives to garner more accurate data. The study also suggested that instead of requiring that all 10 labels be matched successfully, an approximate matching should also be accepted.

Another change to the GOTCHA system that may be implemented would allow the user to ask for a new inkblot picture when creating a password. This way, the inkblots that don't resonate with users can be discarded so that they can use more memorable inkblots.

The developers of GOT-CHA invite members of the Carnegie Mellon community to attempt to breach their new password system in the GOT-CHA Challenge, which can be found online. Any artificial intelligence technique that can break their system would have to be truly remarkable, because as simple as describing random inkblots may seem, it has opened the doors to a new era of password security.



An example of the inkblots used in the study.

How chemical agents wreak havoc in biological systems

Jeremiah Blocki is working on a project that uses inkblots to make pass-

Peter Lee/Staff Photographer

ARIEL HOFFMAIER Staffwriter

DESIREE XU

Business Manager

It is conventional to imagine a war consisting of battlefields laden with explosives, firearms, and missiles. More recently, however, terrorists and offensive armies have turned to chemical terrorism, as evidenced by the attacks in Syria this past summer. How do these terroristic agents affect the body?

Chemical terrorism is a method of attack that involves the intentional release of manufactured, extremely potent toxic chemicals. The most effective modern chemical weapons rely on agents with high killing power those that can exterminate the largest population with minimal chemical concentration. Oddly enough, there is a large overlap between the chemicals used in warfare and in insecticides.

It is common to picture chemical weapons on a large, extravagant scale, such as the bomb in an action movie that discharges devastating chemicals above an unsuspecting metropolis. But as early as 1995, something as inconspicuous as an exploding canister has been used as a toxic gas release. That year, Aum Shinrikyo — a religious terrorist group in Japan used a small, explosive canister to release sarin gas in the Tokyo subway, killing 13 and wounding thousands. Thus,

explosive devices, chemical agents should be considered weapons of mass destruction.

From least to most aggressive, the most typically dreaded chemcial agents are sarin, cyclosarin, soman, VX, and novichoks, according to howstuffworks.com.

Sarin is a nerve agent that inhibits the cholinesterase enzyme, which nerve cells use to break down acetylcholine. Acetylcholine communicates between nerve cells and tells muscles to contract. Muscles lacking cholinesterase cannot clear the acetylcholine messengers, so they begin to contract uncontrollably. This eventually leads to death by suffocation, since the muscular diaphragm is incapacitated. With an acting time of five to 12 hours, sarin works fairly quickly and is relatively easy to manufacture.

Cyclosarin is also a nerve agent, working identically to sarin with double the toxicity. For example, if a person was stuck in a cubic-meter-large closet containing a mere 35 milligrams of airborne cyclosarin, they would be killed within one minute.

Soman, also similar to sarin, acts even faster. Depending on the dosage, which is nearly as toxic as cyclosarin, soman kills in a time between 40 seconds and 10 minutes.

VX operates identically to sarin and is 10 times more potent — just 10 milligrams exposure to the skin can kill a person. The primary differ-

even without the presence ence between them is that VX of nuclear bombs or similar is a liquid, whereas sarin is

gaseous. Novichoks are toxic nerve agents manufactured from the mixture of two otherwise ordinary chemicals. At least three novichoks existed as of 1990, but the extent to which the quantity has changed since then is largely unknown. Every novichok agent is more lethal than VX by up to 10 times. Novichoks are especially dangerous because their inner workings are not well understood, which may render current antidotes use-

Chemical agents that do not attack the nerves can have less extreme effects. For example, if an offender were to use blistering agents like mustard gas, victims may suffer blistered skin and destroyed lung tissue but would risk death less than with nerve agents.

Chemical weapons are more intimidating than traditional weapons, since soldiers and civilians have a more difficult time protecting themselves. When chemical attack is judged a possibility on the battlefield, soldiers guard themselves with gas masks and total skin coverings. However, chemical attacks can come without warning, and civilians can be left vulnerable to the devastation. Due to their catastrophic effects, chemical weapons were prohibited by the Geneva Convention of 1925. Still, trespasses of the provision continue to be a major threat around the world.

Write for SciTech scitech@thetartan.org





"The library should be open all weekend, 24/7."

Hunt Library will introduce 24/7 hours on a trial basis from Dec 1 through spring finals.

"More access to more journals."

Effective Nov 15, the library has licensed online access to 2954 additional top quality journals.

"VPN is very unreliable."

Coming soon! EZproxy access to journals and databases for off campus CMU users.

"Install Chrome on computers. Pleeeeeeeeeaz!" All library-managed computers now have Chrome.

"Offer healthier options at Maggie Murph Cafe."

We shared your comments with CulinArt. They are reviewing selections and adding new choices.

"Redo the website. This would be my #1 priority."

The library will launch a new website in early 2014. Meanwhile, have you tried the BrowZine tablet app to access scholarly journals across disciplines?

*details at search.library.cmu.edu

Have more to say? Watch for the LibQUAL+Lite Survey | spring 2014

LaunchCMU showcases work of start-up companies

ROHAN VARMA

Staffwriter

In the last year, Carnegie Mellon University professors and students have launched a record 36 startup companies, according to a Carnegie Mellon press release. Looking strictly at the ratio between the number of startups created and the amount of federal research money provided, dollar for dollar, Carnegie Mellon University has spun off more startups than any other university in the country. Putting it best, Carnegie Mellon University President Subra Suresh said, "This is literally bang for the buck.'

Last week these innovations were presented at LaunchCMU, a showcase of the university's research and entrepreneurial feats hosted by the Carnegie Mellon Center for Innovation and Entrepreneurship.

The Marauder's Map

"Our main goal is to make

the Marauder's Map from *Har*ry Potter a reality.'

This is how Shoou-I Yu, a Ph.D. student at Carnegie Mellon's Informedia Lab, described the overarching goals of his startup company.

The product is currently fully functional and being tested in a nursing home. It utilizes data provided by almost 25 cameras around the nursing home to identify who each specific person is and track their location as they walk around the map.

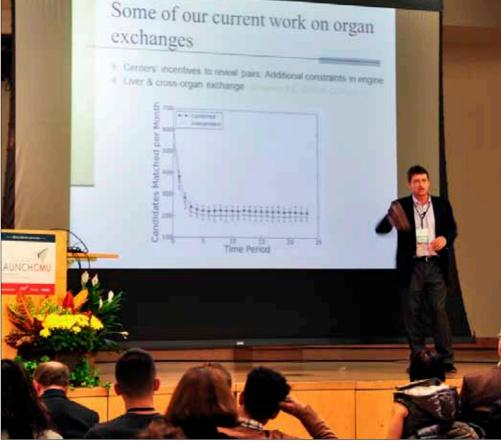
Perhaps the most interesting aspect about this company is that the map provides information back to the user exactly the way that J.K. Rowling envisioned it when she invented the idea of the Marauder's

"We believe that our product can be especially impactful in long-term health care," Yu said. "In nursing homes like the one where we are testing, doctors can only come once or twice a week so there isn't anyone to observe patient's health. These automated technologies can monitor the patients and provide a diagnosis. For example, we can say whether someone sat in the dining room and talked during dinner time or slept through it instead."

While the tangible impact that this company will have on health care is clear, Yu envisions that there will be uses in the commercial industry as well. "We can have this in supermarkets as well. When you swipe your card, you give your identity at the cashier and we could backtrack to see how you walked around the store. This would give useful information on your shopping habits and inform the store on how to best place their products around the store," he said.

Admittedly, Yu said, "I know there are some big privacy issues for that idea but it just sounds cool."

And "cool" may be an apt word to describe Yu's research. In addition to the benefits that it can provide to the real world, the fact that they were able to recreate a fantasy from the world of Harry Potter is an amazing feat on its own.



Research presented at LaunchCMU included algorithms that expedite the process of organ exchange.

Smart Headlights

Another company, sprouting from the Illumination and Imaging Lab, is developing headlights that will be able to observe the world around the car and direct its beams accordingly.

Robert Tamburo, a Carnegie Mellon project scientist and a member of the group responsible for this product, explained that the headlights focus the lights in front of the car so that some of the usual inhibitors to vision will be removed.

For instance, if there is an oncoming car, the headlight will identify the vehicle and not shine a light at the car. What this means is that both cars will not get the dangerous glare created from headlights.

Tamburo said, "Theoretically, with our product you could drive around with your high beams on and not mess anything up."

On a much smaller and more intriguing scale, the sion while driving in the rain, as if it weren't raining in the first place.

The headlights are programmed through a computer chip created by the company, and Tamburo said that as headlights will be able to long as people know how to

"Our main goal is to make the Marauder's Map from Harry Potter a reality."

> Shoou-I Yu Ph.D. student, Informedia Lab

sense the location of falling raindrops and only shine light between them. This incredible capability allows the driver to have close to 100 percent vi-

program the chip, they can provide specifications for the lights themselves. He jokingly said you could even program the car to specifically shine

light on all birds that fly by.

Tamburo believes the product will easily permeate the market because most cars on the road already have the ability to implement these headlights. It's only a matter of time before even our headlights will become "smart."

The list of impressive technologies developed and commercialized at Carnegie Mellon University goes on. From EEme, a company that crunches data to identify ways to maximize energy efficiency in homes, to Cloud Board, a children's game that brings video games into real life and helps develop scientific knowledge, professors and students at Carnegie Mellon continue to push the boundaries of how technology can help solve problems.



Provost Mark Kamlet introduces attendees at LaunchCMU.

Online lectures debut at CMU

GEORGE LEDERMAN Junior Staffwriter

While the Massachusetts Institute of Technology, Stanford University, and Harvard University have received huge publicity for their Massive Open Online Courses (MOOCs), Carnegie Mellon has been quietly developing its own set of technological learning tools which were on display Thursday in conjunction with the launch of President Suresh's Simon Initiative.

Carnegie Mellon's strength in both technology and in understanding learning begs the question — why isn't Carnegie Mellon known for its educational technology?

Perhaps the answer lies in Carnegie Mellon's rich history as a center for data analytics and machine learning — the university has facilitated some cautious investigations into online learning but has not wanted to jump into the frav before understanding the data.

Now armed with research, Carnegie Mellon has begun to integrate new technology into its for-credit classes. Professor Jelena Kovacevic, along with three other electrical and computer engineering (ECE) professors, have been teaching courses this fall as part of the ECE department's new Technology-Enhanced Hybrid MS program where students spend one semester off campus and two on campus. Her class, "Wavelets and Multiresolution Techniques," has been offered to both residential and distance students by leveraging a learning platform from Acatar, a Carnegie Mellon startup.

Kovacevic recorded the lectures for her course this summer so that she could spend class time engaging the students in interactive activities, responding to students questions, and ensuring they understand the material. The notion of the "flipped classroom" — where lectures are watched outside of class-time — was popularized recently in conjunc-

tion with the Khan Academy lectures but remains rare in for-credit university courses. Thus far, Kovacevic's course has received overwhelmingly positive feedback, which is no surprise. Recent studies by the Department of Education have shown that blended courses, comprised of both face-to-face interaction as well as online content - including courses where 39-70 percent of material is online produce better outcomes than either fully online experiences or traditional learning techniques.

The online courses appear to benefit the faculty as well. Kovacevic holds an appointment in biomedical engineering, a courtesy appointment in electrical and computer engineering, and is the director of the Center for Bio-Image Informatics. As a leading expert on wavelets, she travels frequently to speak at conferences, runs an active lab on the Pittsburgh campus, and physically lives in New York City.

While Kovacevic's travel schedule may be heavier than some professors, that level of travel is becoming increasingly popular. It is not unusual for a professor to miss several lectures per semester due to travel — a phenomenon that could be mitigated by pre-recorded video lectures.

Since the spring, Kovacevic has chaired a committee to investigate "Technology Enhanced Quality Education" on behalf of the Carnegie Institute of Technology. She sees the potential for online education to engage students and make more content available to the public, but she does not want to take away some of the benefits of physical learning.

"The power of the campus is not what we learn, but the community we build," said Kovacevic. But she believes that different levels of technology may be appropriate to optimize learning outcomes for different circumstances depending on factors like the student population or faculty preferences.

Acatar, the company that powers Kovacevic's course, began last year as a Carnegie Mellon startup. It provides an easily customizable approach for professors to create technology-enhanced courses, drawing not only on research and expertise from Carnegie Mellon, but also on technology from Carnegie Mellon's ecosystem of startups.

Acatar differs from the more popular providers of online content in both purpose and level of publicity. Andrew Ng's (CS '97) Machine Learning course has become the quintessential MOOC with more than 100,000 students enrolled last term. This course is 100 percent online so it can scale to huge class sizes and is a radical break from previous educational models.

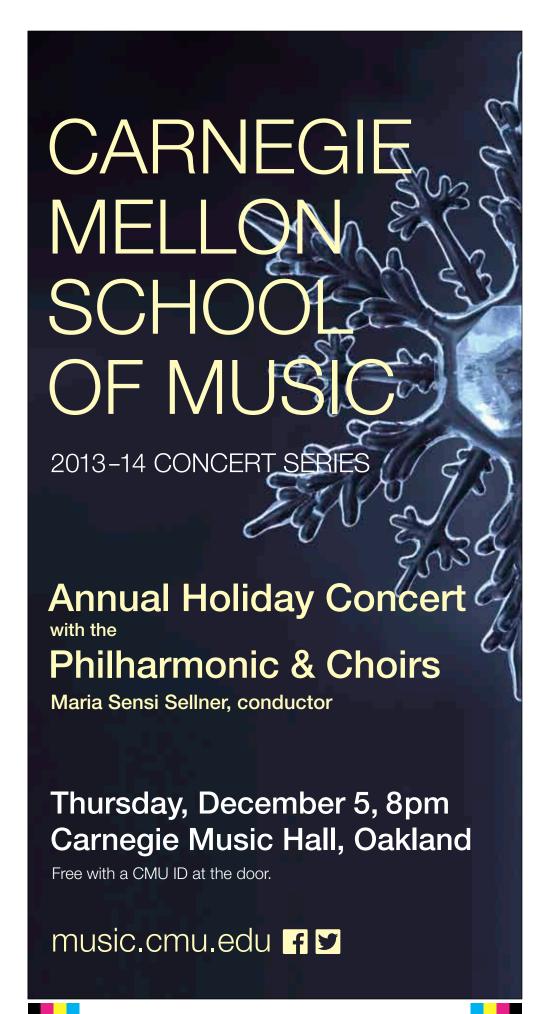
Acatar, conversely, allows professors to choose what percentage of content to put online. This allows for the blended model recommended by the Department of Education but lacks the cachet of some magic educational bul-

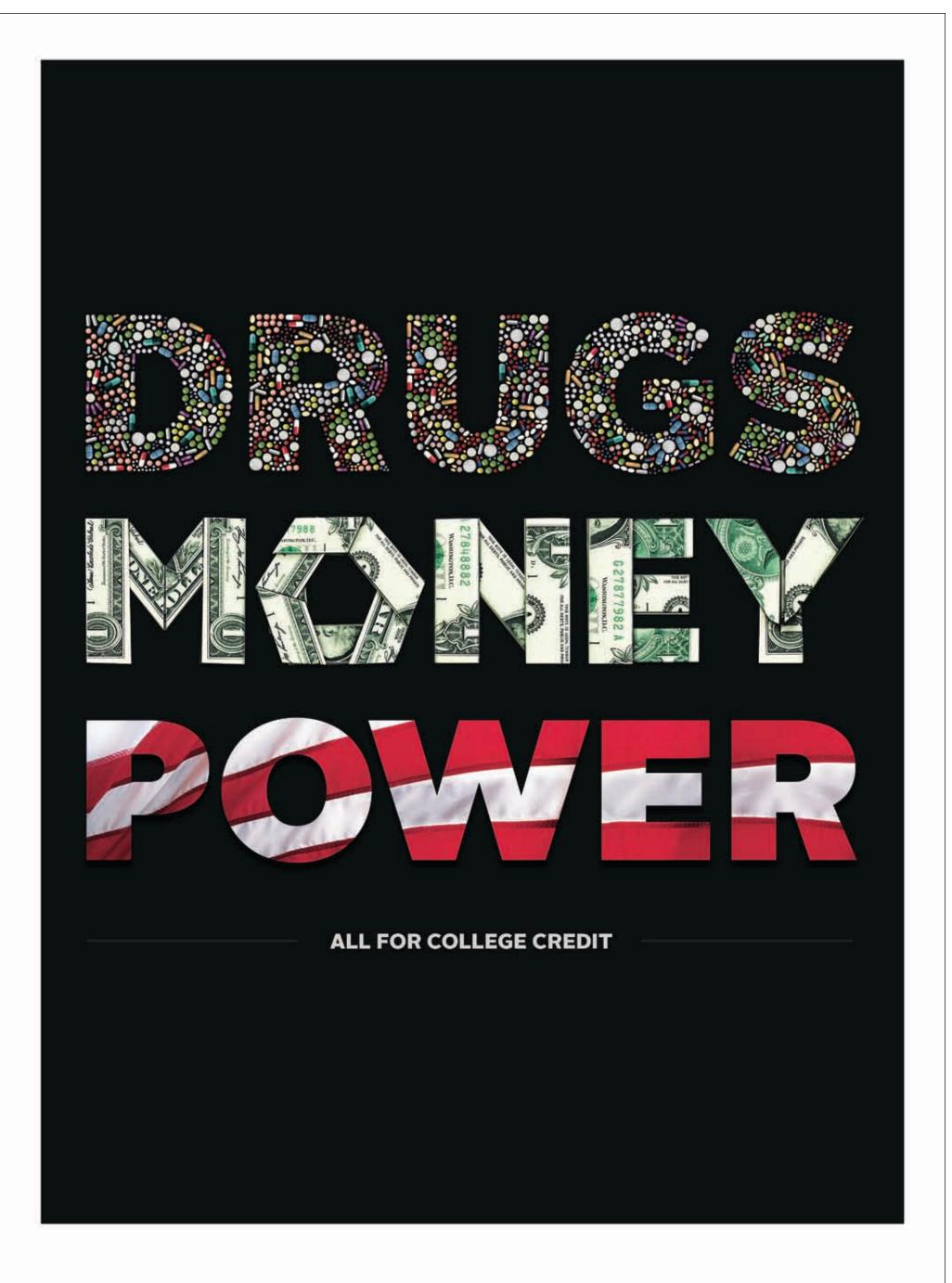
So does technology truly improve learning outcomes?

"Unfortunately, no one really knows," wrote former Princeton University President William Bowen in his influential article on educational technology published in the Chronicle of Higher Education earlier this year.

However, this is just the question that President Suresh's Simon Initiative aims to answer. As a core component, the initiative will amass high quality data sets on educational technology and share them with researchers, policy makers, and educators in a global setting.

The new initiative will continue Carnegie Mellon's data-driven approach to educational technology. And perhaps by leveraging this data, the less well-known attempts at technology enhanced education like Kovacevic's class or Acatar's tools will be the educational technology with the most lasting impact.



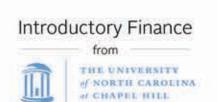


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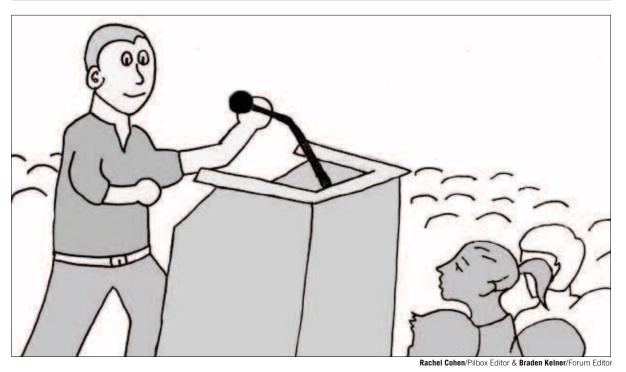






Horum

FROM THE EDITORIAL BOARD



Student involvement needed in appointment of SBVP

Junior electrical and computer engineering major Ian Glasner recently took on the role of student body vice president after former student body vice president Peter Masters, junior international relations and politics and philosophy double major, stepped down from the position.

While The Tartan appreciates the swift appointment for a vacant position, the student body should have been given the chance to meet Glasner and start a dialogue with him when he was nominated, and later approved, by Student Senate for the position.

Currently, Student Senate's bylaws dictate that the student body president must nominate a candidate if the student body vice president position becomes vacant. The bylaws state that the Student Senate must then approve the appointment.

Student Body President Lindsay MacGillivray and Student Senate at large did indeed follow these bylaws. However, Student Senate may wish to revise the bylaws to include a period of time during which the student body may provide its own input and ask questions of the nominated candidate.

Student Senate has held a variety of town hall meetings to reach out to the student body previously and should have held a similar open forum to allow Glasner to describe his goals as student body vice president and respond to possible concerns. An open forum with Glasner would have been a perfect opportunity for him to hear, and take into consideration, the needs of the student body.

Admittedly, Student Senate has taken initiative to identify student concerns this semester with the launch of the WTF CMU (What to Fix at Carnegie Mellon) Facebook page. However, an open forum for students to ask Glasner questions and voice concerns would have provided a level of interaction that WTF CMU and similar initiatives cannot provide.

This criticism, however, should not reflect on the qualifications and credentials of Glasner. Glasner seems fit for the role based on his previous experience as a member of MacGillivray's student government cabinet and his involvement in the campus community as a community advisor, a member of the executive committee of Sigma Alpha Epsilon Fraternity, and a founding member of a student organization dedicated to helping those in Haiti.

The Tartan only hopes that the student body will be more involved in the process of appointed positions within Student Senate if similar vacancies occur in the future.

Balance vegetarianism with meat-eating habits

ariel Hoffmain ARIEL HOFFMAIER

The time has come to take a look at vegetarianism again. Vegetarians and vegans have earned a reputation for being preachy, a stereotype that derives from its grain of truth. But just for a moment, let's put aside the stigma and reevaluate the facts.

Vegetarianism is often portrayed as an extreme life choice with supporters who impinge upon the freedoms of meat-eaters, but this notion can be mitigated if the choice to eat meat is balanced with vegetarian

Contrary to popular belief, vegetarianism is not a herd mentality. Rather, it is better thought of as a population of individuals with different motivations guiding them toward the same lifestyle choice.

The range of incentives for vegetarianism is wide indeed. First, plenty of people make the switch for their health. This makes sense when it is considered that vegetarianism has been tied to lower risk of heart disease, diabetes, and obesity, as well as a longer life span in general, according to the American Cancer Society.

On the other hand, the most commonly cited motivation for vegetarianism is that the meat industry is institutionalized animal cruelty. Of course, there are arguments about evolution and the natural hierarchy of the food chain, but there is nothing natural about engineering chickens to grow so fat so quickly that they suffer crippling health defects. It is also not natural to cram pigs so tightly into cages that they go virtually mad from lack of stimulation. Early mutilation, life-long suffering, and a bloody death is the fate for many animals that Americans will

later have on their dinner plates. These facts are indisputable, and most meat-eaters are knowledgeable of them. However, being able to enjoy meat must involve separating the dining experience with the awareness of where the food comes from. This enjoyment comes only through a silencing of the moral compass. The moral compass usually makes people empathize with the suffering of any living creature and tells them that taking life is wrong.

Additionally, there is a kind of hypocrisy to the arbitrariness with which we assign certain animals to be loved and others to be slaughtered in mass. All of these factors makes it difficult to be an omnivore with a clear conscience.

The most persuasive argument

for vegetarianism is also perhaps the least well-known. In addition to murdering animals, the meat industry plays an enormous role in killing the environment because of the huge amount of resources it takes to raise livestock: The meat industry uses 30 percent of Earth's total land mass, as well as 70 percent of all grain, 50 percent of available water, and 33 percent of all fossil fuels in the United States, according to ChooseVeg.com.

These statistics do not even begin to cover the water pollution caused by runoff of animal wastes and the methane emissions from millions of cows. Methane, a greenhouse gas more powerful than carbon dioxide, is responsible for nearly half of the world's human-induced global warming, and animal agriculture is the number one source of it, according to nonprofit organization EarthSave.

Perhaps the reason vegans and vegetarians get a bad rap is because they like to speak in extremes. They push forward with harrowing information about the meat industry and demand immediate and total conversion. They wonder: if the facts are in their favor — as they clearly are — why isn't everyone jumping at the opportunity to better themselves, other living creatures, and the planet?

The answer is that meat tastes good, and vegetarians always seem to brush over that small point. What might surprise both the vegetarians and the omnivores, however, is that the argument is not black and white. Moderation is an option.

According to Vegetarian Times, while only 7.3 million Americans are vegetarians, 22.8 million more follow a vegetarian-inclined diet. This diet doesn't entail giving up meat entirely. Even small lifestyle changes can have an enormous impact on a large scale.

The Environmental Defense Fund has estimated that if every American went vegetarian for just one day a week, it would be equivalent to taking an incredible 8 million cars off of the road for that week.

So, try breaking the assumption that meat has to be the default for every meal. Try dubbing certain days each week "Meatless Days". Try opting for no protein or hitting up Evgefstos for their awesome spinach-artichoke dip. Maybe, with time, you'll experience a gradual shift — so slow you hardly notice that it's happening — to something increasingly resembling the vegetarianism you were so positive was not

Ariel Hoffmaier (ahoffmai@) is a staffwriter for The Tartan.

Clarity a problem in Simon Initiative announcement

Confused about the Simon Initiative? So is The Tartan.

In an email sent to the campus community last Monday by the President's Office, President Subra Suresh announced the Simon Initiative, a program aimed at enhancing the ways in which students interact with technology to learn. Through Carnegie Mellon's extensive work with learning data, the university hopes to improve education for students across the globe.

However, the initiative is ill-defined, and its outlined description and goals are too vague to instill confidence in the project. There is no lucid explanation on the website or in the email announcing the initiative.

The initial email, as well as the Simon Initiative's website, promote the program as a way to gain information about how students currently learn and how they can be better educated with the help of technology.

But the public information about the initiative does little more than give readers an ambiguous idea of what the program aims to achieve.

The information about the initiative promises quantifiable information to achieve these goals, but there are no outlined quantifiable ways to measure the success of the initiative. Instead, the announcements are merely filled with buzzwords that amorphously hint at progress.

The recent email raises some pressing questions. What kind of research will the initiative specifically pursue to produce quantifiable learning outcomes? How will the Global Learning Council (GLC), announced alongside the Simon Initiative, provide greater global access to learning tools? How much will the initiative cost?

If these communications are how the President's Office will interact with its students, how can it expect to convey information to other parties for fundraising, growth, and public relations?

Suresh, and others involved in the initiative, should have provided a tentative outline of tangible goals to the public and predicted impacts that the Simon Initiative will have. An outline, similar to a 10-year plan, could provide the campus community with more information about what the initiative aims to accomplish.

The President's Office wanted the university's community to know about the initiative. Otherwise, it would not have sent the email describing the initiative. But if the goal was to provide useful information, then the email was a failure.

MPAA should emphasize violence over sex in ratings

PG-13 movies can be pretty violent, but now, the rating may as well be obsolete. PG-13-rated films surpassed R-rated films in the amount of gun violence that they contained in 2011 and 2012, according to a recent study published in Pediatrics, the official journal of the American Academy of Pediatrics.

The issue here doesn't lie with the amount of violence in these films, since there's no correlation between violence in films and the real world. As pointed out by David Horowitz of Media Coalition, Inc. in an interview with USA Today, real-world crime rates have dropped significantly.

The real issue is that the MPAA is not strict about the violence it por-

trays in PG-13 movies, yet it is still strict about the sexual content in films. For example, including an orgasm scene yeilds an NC-17 rating.

Now that violence seems to have little effect on a movie's rating, these ratings only signify the amount of sexual content in the film. The MPAA should place more emphasis on violence than on sex when determining which ratings to attach to films. Sex is a natural part of life while gun violence is not.

While changing popular movie content is unlikely, the Motion Picture Association of America (MPAA) needs to put forward clearer and more sensible definitions for PG-13 and R that are more friendly to sexual content compared to violence.

The American people can see a man tortured without becoming upset, as in Casino Royale. But sex in a movie, like Black Swan, enrages some moviegoers. Those reactions are most unfortunate because there's no immediate fix; Americans' desensitization to violence and their highly sensitive approach to sex have been decades in the making.

While it'd be great to see the MPAA sensibly judge the amount of skin or sexual contact allowed, that remains unlikely. In the meantime, Hollywood needs to scale back its violence in PG-13 movies, or just bite the bullet and call them what they should be: rated R.



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China must better aid typhoon victims

On Nov. 11, Typhoon Haiyan ravaged and tore into the Philippines. The typhoon made landfall near the city of Tacloban, and some estimates point to an initial death toll of 4,400, largely from Tacloban. Haiyan stormed through the Philippines and damaged many other cities, whose people are worried that aid will come only to Tacloban.

Some foreign powers are trying to help the Philippines. The Philippines occupy a strategic area in the Pacific, far enough to elude China's influences but close enough for conflict. Earlier in August, China and the Philippines argued over control of a small group of islands called the Spratly Islands. The Philippines, along with Japan and South Korea, have been on the receiving end of China's recent aggressive claims for surrounding islands in the South China Sea.

While China has the ability to help those affected in the Philippines, the nation has made itself seem like a sulking rival, seemingly unable to help out when, in reality, it is able to.

In response to Typhoon Hai-

yan, the United States sent the USS George Washington aircraft carrier, filled to the brim with relief supplies, while Japan is set to embark on its largest relief effort yet. Even the British, who don't directly touch the Pacific, are sending their own aircraft carrier.

Meanwhile, the Chinese are donating a total of \$1.6 million, far less than any of the above operations. This figure only appeared after their initial donation of \$100,000 - a measly sum for such a large, prosperous country. The donation contrasts with China's major investments in a few select African countries and their large relief effort after the Pakistan earthquake.

China's initial sum of \$100,000 is a reflection of current relations with the Philippines and will reflect horribly on their part. Moreover, the only substantial aid reaching the Philippines is from the Red Cross and other countries right now. China's strategic location would allow the country to give the Philippines the most aid.

Additionally, if Chinese aid workers were willing, they could perform relief work of the highest order. China would benefit from these efforts because they would look like strong leaders and could help to diffuse territorial disputes and tension.

The U.S. once colonized the Phil-

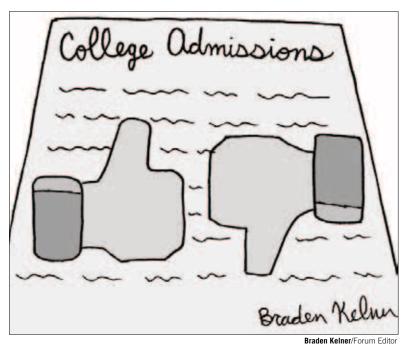
ippines, and ill-feeling toward the U.S. has largely abated within the country since then. The U.S. may be trying to maintain these now good relations with its sizable aid package and impressive warship, which carries helicopters to deliver food and medical kits to remote areas.

China, however, seems to be happy with where relations stand with the Philippines. Hence, it has contributed a negligible amount of aid, adding to chilled relations. Generally for countries, especially those that go through monsoon season on a regular basis (like Singapore, Malaysia, and China), a notable way to aid the Philippines would be to send workers, engineers, and architects to further enforce and strengthen any infrastructure that remains. These efforts would help the Philippines minimize storm-related damage in the future. However, China has not provided this type of aid.

In the next few days, it will be intriguing to see how China continues to respond. Will the change in aid from an initial \$100,000 donation to a \$1.6 million donation reflect an upward trend in aid sent to the Philippines, or was the increased donation the last of China's aid?

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

Colleges shouldn't find students on Facebook



BRANDON SCHMUCK

According to a 2013 CareerBuilder survey, 39 percent of companies use social networks to screen potential candidates, up from 37 percent last year. Because companies are increasingly using social media websites to determine who to hire, it makes sense that colleges would join them when deciding which prospective students to accept and which to deny. According to a Kaplan telephone survey, 31 percent of college admissions officers have visited a prospective student's profile to gain more information about them.

If hiring managers are already using social media to gain information about potential job candidates, why is it a big deal for colleges to do the same for prospective students?

The answer lies in the way teens use social media. Colleges cannot accurately judge students by their profiles because too many teens are unaware of the consequences of online posts. Before colleges begin to use this information, educators must make teens more aware of the bearing that the information that they post online can have in their lives. According to a Pew Research Center study, 19 percent of teens later regret information that they post online. Teens may be unaware of the effects that their posts can hold.

A survey by CASAColumbia found that the number of teens posting pictures about alcohol or drug use online is exceptionally high. For teens between the ages of 16-17, 68 percent of respondents say that they have seen pictures of other teens using drugs or alcohol on social media sites. It is becoming more socially acceptable for teens to post things that would otherwise be deemed inappropriate. The CASAColumbia survey found that 75 percent of teens believe that seeing their peers use drugs and alcohol on social media networks makes other teens want to act the same way. This belief may stem from the need for teenagers to feel popular or accepted.

However, while this inappropriate content can make teens more accepted by others their age, college counselors that come across this in-

formation can use it against them. According to the Kaplan telephone questionnaire, 30 percent of college admissions officers discovered content online that negatively affected an applicant's outcome.

While the debate over whether or not colleges should look at social media continues to focus on the actions of college counselors, the real problem is the current online activity of teens. The current generation is not aware of the effects of sharing online content and does little in the way of protecting this information. The Pew Research Center revealed that 14 percent of teens have their Facebook profiles completely public, while another 25 percent have only partial privacy settings.

Teens may care more about hiding their information from their parents than admissions counselors. College counselors seem more distant than parents, who directly influence teens, and the idea of being denied by a college over a harmless social media post could seem absurd. A McAfee study found that 70 percent of teens hide online activity from parents, while 19.9 percent manipulate settings to block social media from their parents.

This information that teens are working to keep away from their parents is the same information that could result in a rejection letter from their dream college. Parents may be unaware of this content and its effects on their children.

Because most teenagers do not have experience with employers or decision making in many real-life situations, it only makes sense that teens are naturally more irresponsible than adults on social media. However, while people focus on the ways in which colleges look at prospective students online, the real issue is how teens use social media. Many put content online that could potentially ruin their lives, and most schools and parents do little to stop them. We must refocus on educating teens on the effects of social media so that college admissions counselors have nothing negative to find. While most high schools neglect social media and outright ban it within their walls, they must change their focus and responsibly incorporate it into their curriculum.

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

Ask for consent every step of the way

Chloe & Thompson

CHLOE THOMPSON

Last month, a letter from an unidentified brother of the Phi Kappa Tau fraternity at the Georgia Institute of Technology was published on the Internet. In this letter, the brother enumerates techniques to pick up girls at parties. It is signed, "in luring rapebait." Obviously, the letter is decidedly creepy, but the brother uses a few interesting phrases. For instance, at one point he writes, "AL-WAYS START WITH THE MAKING OUT!!!! NO RAPING."

This letter got me thinking. A few of the other techniques he discusses in the letter have some extremely questionable implications in terms of consent (mostly his, "if anything fails, go get more alcohol," point), but this point is the only time that the brother acknowledges that some of his techniques could lead to rape. Did the fraternity brother really fail

to understand that a kiss and consent are two very different things?

As Jamie Utt of the Good Men Project points out in his article, "Open Letter to the Rapey Frat Brother and the 'How to Get Laid' Generation," this boy may not actually understand what rape is. Utt argues in his open letter that America's cultural definitions of consent and a prospective partner? Culturally, sex are so skewed that some people simply don't understand what is defined as consent and what is defined as rape. If society lacks a clear cultural language about sex, then a culture that allows sexual assault is almost inevitable.

The fraternity brother repeatedly suggests that other brothers get girls to grind against them or sneak kisses on girls' necks or cheeks as the first step. He also says, "don't finger them... yet," and says nothing about actually asking someone if it's okay to touch their genitals. It's not necessary to explicitly ask to kiss someone — though it is deeply necessary to pay attention to the person you're kissing, and if they seem at all uncomfortable, you should most definitely stop — but the idea of fingering or touching anyone else in that manner without express permission is deeply problematic.

What, exactly, is so wrong with asking for permission? Why advocate for a culture that encourages pushing the envelope as far as possible, instead of checking in with people have this idea that consent to one thing is consent to everything, which is why sexual assault victims are often asked how they were behaving or what they were wearing at the time of the attack. However, consent to kissing on a dance floor is not consent to being fingered on a dance floor; consent to being fingered is not consent to any other kind of sexual contact.

Consent must be obtained for each and every step of the process; it cannot be implied by skirt length or a smile. Consent can only be given by a clear, enthusiastic, and repeated

Chloe Thompson (cet@) is a staffwriter for The Tartan.

A PERSON'S OPINION

The inauguration ceremony events for President Subra Suresh were this week. So we asked What advice would you give Suresh now that he is inaugurated?



Jordan Green ChemE, BME Junior

"Don't love the drive you have to make changes."



Tobi Owoputi Computer Science Senior

"Support students and groups and activities."



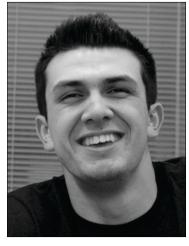
Lucy Guo Computer Science Sophomore

"Take more time into thinking about students' wellbeing and develop resources to help us."



Brendan Badia ECE, Economics Junior

"Listen to students who have more ideas than me."



Darren Kerfoot MechE Sophomore

"The president should support Greek Life as a social outlet to the academic struggles at CMU."

Men's soccer team ends winning season with tough loss

WILLIAM PARK Sports Editor

The No. 12 men's soccer team's NCAA Championship aspirations ended this Sunday in a 1-0 loss to No. 22 Montclair State University. On that rainy Pittsburgh afternoon, the Tartans couldn't crack the tight Montclair defense.

The Tartans had many quality chances on goal, starting in the 27th minute. Senior forward Max Tassano slipped behind the defense and took a hard low shot from outside the penalty box, but Montclair's goalie Kevin Lynch made a great diving save to his right.

(above) attempts a cross into the penalty box.

Lynch made four more

saves and was a big presence er in the head of a disputed in net.

Montclair State scored the only goal of the game after a poor clearance in the 30th minute. A deep throwin bounced into the Carnegie Mellon penalty box, but no one was able to clear it and Montclair's Lucas Terci fired an uncontested shot to the right corner of the net.

Montclair State took six shots in the game, and the Tartans took 12.

In the 34th minute, the Tartans received a break when Montclair's Kazari Trought was given a straight red card after elbowing sophomore midfielder Jordan Friedlandthrow-in.

With the man advantage, the Tartans created several threatening scoring chances. But a strong Montclair midfield made it difficult for the Tartans to win loose balls and control possession.

In the second half, Montclair was content to sit back and defend. The Tartans maintained possession in the opposing third, but the margin for error was extremely small given how tight the Montclair defense was.

"They just made it tough for us and defended with everybody," head coach Arron Lujan said. "We kept trying and trying — we had a few really good chances — and we just couldn't put it away."

Senior defender Ben Bryant was determined to carry his team into the next round. In the 70th minute, he singlehandedly stopped a Montclair counterattack and dribbled into the defense. He beat his defender and fired a shot that went inches above the cross-

Bryant is one of six senior starters who played their final game. The Tartans will lose their two forwards Tassano and Chris Wysocki, who combined for 15 goals this season, as well as midfielders Mike Ferraco and Matt Sarett.

Senior goalkeeper Christopher Madden made several crucial saves throughout the season and finished with six shutouts. "We have a lot of great seniors, and we're going to miss them a lot," Lujan said.

After the game, several senior players had tears in their eyes and shared long embraces with teammates and family members.

'To go out in a cruel game like today was tough, but they should be proud of what they've done," Lujan said.

Over their four years, the senior class led the team to two NCAA Tournaments and a University Athletic Association (UAA) title last year.

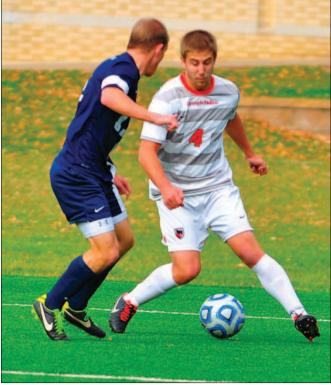
Notable players who are also graduating include forward Jerome Reano, a speedy attacker who consistently gave the team a spark off the bench, and midfielder Cole

Christensen. But with a 12-3-3 record and a second-place finish in the UAA Conference, the season was by no means a disap-

pointment.

"The team was great this year. It's not easy to repeat what we did last year because we're not surprising anyone," Lujan said. "For us to come out and get to the same round in the NCAA Tournament that we did last year, I think, is a great accomplishment."





Jason Chen/Staff Photographer

Senior forward Chris Wysocki scored two goals against Virginia Wesleyan College on Saturday and had three shots against Montclair State



Maryyann Landlord/Staff Photographer



Senior forward Max Tassano attempts a shot against Virginia Wesleyan. Tassano recorded one shot on goal in Sunday's loss.

Senior midfielder Matt Sarett challenges a Virginia Wesleyan player. Sarett missed Sunday's game due to an injury.



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Special teams and trick plays foil football team in season finale

ZEKE ROSENBERG *Junior Staffwriter*

The Carnegie Mellon football team opened its final game of the season against Case Western Reserve University on an optimistic note – but ultimately lost 35-32 last Saturday night.

After an impressive Carnegie Mellon defensive stop ended Case Western's opening drive, senior quarterback Rob Kalkstein connected with junior wide receiver Tim Swanson for a 72-yard touchdown score.

The momentum did not last long, though. Two drives later, on fourth-and-eleven on the Carnegie Mellon 46-yard line, Case Western lined up in a punt formation but shocked the Tartans and pulled off a flea flicker that went for 29 yards and an improbable first down, setting up a tying score for Case.

After that, the momentum really seemed to roll in Case Western's direction. A lost fumble by Carnegie Mellon's special teams and impressive kick returns from Case led to a 28–10 deficit by the middle of the second quarter.

The lost fumble was symptomatic of butterfingers in the Carnegie Mellon kickreturn teams. Five different kicks were dropped or fumbled on kickoffs, leading to consistently poor field position.

In what turned out to be only a three-point loss, the field position battle probably made the difference.

On the offensive side of the ball, the Tartans alternated between impressive drives and frustrating possessions that stalled at midfield.

Both the aerial attack and the running game were inconsistent; they were often impressive, but sometimes underwhelming.

The offensive line can't be



Jonathan Leung/Assistant Photo Editor

Senior wide receiver Tim Kikta makes a move against a Case Western defender. Kikta caught four of senior quarterback Rob Kalkstein's 22 completed passes. Kalkstein finished the game with a career-high 327 passing yards, which makes him the school's all-time passing leader.

blamed, however. The blocking was great, and Kalkstein's blind side was well protected throughout the entire game, thanks to a strong showing from the left tackle senior Alex Copeland.

Copeland wasn't satisfied with his individual performance, and felt this was a game Carnegie Mellon could have won.

"It's tough," he said. "You try and do what you want to do with the offense, put up 32 points, [but] the offense and defense didn't really sync together, and as a team it's really

tough on all of us. Everybody played well during the season and really tried to do all that they could do, but at the end, it's tough to see that it didn't all come together."

This sentiment echoed a frustrating season in which very few bounces seemed to go in the Tartans' favor. Copeland continued, "We could have done a lot better this season; we had a lot of close losses."

The offense did all it could to mount a comeback, including an electrifying final drive capped with a great two-point conversion pass to Swanson. The ensuing onside kick was a 50/50 ball, but Case Western recovered it to seal the game.

On the other side of the football, the defense gave up 35 points, but deserved far more credit.

Drives often started close to midfield, and the Case Western offense was inconsistent, relying on big plays as opposed to consistent positive plays to move down the field.

The defense's real Achilles' heel throughout the game was the flea flicker. Flea flickers resulted in both the aforemen-

tioned long fourth-down conversion and a touchdown later in the game.

Case Western tried to avoid wherever senior safety Jack Butler was, and with good reason. Whenever he was near the ball, he shut everyone down. It was an unfortunate way for the star's career to end.

"This season was definitely a heartbreaker," Butler said. "We had a lot of close games where we kept it tight and we couldn't pull it out in the end. But I don't regret coming here; I don't regret playing here at all."

It was a cruel ending to some great careers in Carnegie Mellon football. In addition to Butler and Copeland, quarterback Kalkstein ends his distinguished career. His 327 passing yards gave him a total of 5,664 yards for his career, setting a school record.

It was a tough season – one that could have had a wildly different ending based on a few bounces. The 3–7 record doesn't do justice to a team that consistently played hard and kept games close, but just didn't have the luck to pull wins out in the end.





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Sports

Women's soccer season ends early in the NCAA tourney

WILLIAM PARK

Sports Editor

After a magical run into the quarterfinals of the NCAA Championships last season, the women's soccer team fell short in its return to the tournament this year.

On Saturday, the Tartans ended their season with a 1–0 loss to York College of Pennsylvania in the first round of the NCAA Championships.

Expectations were high this season. The Tartans opened the season ranked No. 5 in Division III, but after three straight losses to close the season, the Tartans dropped out of the Top 25 ranking.

Throughout the season, the Tartans struggled to find their

finishing touch: They would consistently outplay and outshoot their opponents, but often couldn't find the back of the net.

"This year, we felt a real need to make it back to NCAA and do well, and I think that pressure — all throughout the season — made it harder for us to perform well," graduate-student goalkeeper Anna Albi

Although they could get by weaker opponents, they struggled against tougher competition in the University Athletic Association (UAA) Conference.

Their poor finishing finally caught up to them against York College. The Tartans outshot York 17–7 but had nothing to show for their strong play.

York College opened the scoring in the 26th minute on an unlucky play when York's Emily Cronise took a weak shot from 20 yards out. The ball appeared to be heading out of bounds, but as Albi went to grab it, the ball took an awkward bounce and spun off of Albi into the net.

The game should not have come down to that goal, however, as the Tartans outplayed York in the second half.

Junior forward Savina Reid created multiple chances in the half. In the 52nd minute, sophomore midfielder Louisa Pendergast played a great through ball to Reid on the right sideline. Reid pulled back past her defender and powered a left-footed shot that went just left of net.

Reid also created another scoring chance six minutes later when she sent a cross into the penalty box that bounced right to sophomore Amanda Broderick at point-blank range. But Broderick couldn't get enough of her foot on the ball, and her shot landed softly in the hands of the York goalie.

It was a bitter end for the graduating class.

"It's really amazing to see how far the program has come, skill-wise and cultural-wise," Albi said. "Our culture is very different — much more competitive and much more serious about being a topranked team than it was my freshman year."

Back in 2010, the team had a pedestrian 8–8 record and peaked last year with a 14–1–5 record.

In addition to Albi, the Tartans lose two strong defenders this year.

Rachel Contopoulos, who led the team in points with two goals and six assists, as well as Brittany Couture, a two-time All-UAA Honorable Mention, played their final games on Saturday.

Senior forward Alex Venegas missed time with a knee injury, but returned to score two goals in six UAA games.

The strength of this team is its youth, and many young players look ready to step up.

First-year goalie Katie Liston gained valuable playing

time, earning a 4–1–0 record in goal, and looks ready to be the next starter for years to come.

Pendergast, who had four goals on the season, has emerged as a crafty and creative offensive playmaker, and sophomore defensive midfielder Carson Quiros is an intimidating presence in the midfield who also scored three goals

First-year defenders Amelia Clark and Samantha Smith should form a strong back line for the next three years.

"I trust the team will be great next year. I'm sure we will have a lot of new talent coming in, and there's a lot of talent there already," Albi

UAA Sports Standings

Men's So	ccer			Football	Women's Soccer							
Univ.	Conf. W	L			Conf.	W	L	Univ.	Conf	W	L	T
Rochester	5-1-1 15	2	2	Wash. U	3–0	8	2	Wash. U.	7-0-0	19	1	0
CMU	4-1-2 12	3	3	CWRU	2-1	5	4	Emory	6-1-0	16	3	1
Emory	4-1-2 11	5	2	Chicago	1–2	6	4	Chicago	3-2-2	11	5	3
Wash. U.	3-2-2 10	4	3	CMU	0–3	3	7	CMU	3-3-1	9	5	2
Brandeis	3-3-1 16	4	1					Brandeis	2-3-2	10	6	3
Chicago	3-4-0 9	6	2	Volleyball				Rochester	1-3-3	6	6	5
CWRU	1-5-1 6	7	4	Univ.	Conf.	W	L	NYU	0-5-2	8	9	2
NYU	0–6–1 6	8	3	Chicago	6–1	27	11	CWRU	0-5-2	7	8	3
				Emory	5–2	33	4					
				CMU	4–3	25	10					
				Wash. U.	6-1	27	8					
				NYU	4–3	28	8					
				CWRU	2-5	16	17					
				Rochester	0–7	9	27					
				Brandeis	1–6	10	25					

Upcoming Schedule

Cross Country

Nov. 23 NCAA Championships, Hanover College, 11 a.m.

Swimming/Diving

Nov. 22 Carnegie Mellon Diving Invite, 6 p.m.

Dec. 5–7 Total Performance Invitational, Kenyon College

Women's Basketball

Nov. 19

Carnegie Mellon at Grove City College, 6 p.m.

Nov. 21

Carnegie Mellon at Allegheny College, 7 p.m.

Nov. 24 Thiel College at Carnegie Mellon, 2 p.m.

Mellon, 2 p.m. Nov. 26 Baldwin Wallace Universi-

ty at Carnegie Mellon, 6 p.m.

Men's Basketball

Nov. 18

Geneva College at Carnegie Mellon, 7:30 p.m.

Nov. 23

University of Pittsburgh-Greensburg at Carnegie Mellon, 3 p.m.

Allegheny College at Carnegie Mellon, 8 p.m.

SPORTS COMMENTARY

Incognito/Martin scandal highlights crass culture in NFL

CARL GLAZERSenior Staffwriter

Football has always been about strength — mental, physical, and emotional toughness are attributes that make a good football player. Skill is not enough; you have to want it more and be willing to suffer

This mindset, which has resulted in an increasingly violent sport, also breeds a dangerous off-the-field environment where hazing has become more prominent.

more.

The recent Richie Incognito/Jonathan Martin scandal is the first case of locker-room hazing being fully exposed to the public.

On Oct. 31, Martin, the starting left tackle, left the Miami Dolphins under the guise of battling emotional issues. A few days later, it was reported that Martin left the team due to bullying and harassment from teammates, with Incognito being named the perpetrator by Martin the next day.

The Dolphins quickly suspended Incognito, and ever since, all parties have been trying to get their side of the story out to the public. What's surprising is that both Martin and Incognito have received their share of supporters.

Former players have criti-

cized Martin for publicizing an in-house conflict. On the other hand, the common public has backed Martin as the victim of senseless bullying.

Hazing has always been a part of football. It is so widely accepted that some coaches use rookie hazing as a tool. Hall of Fame coach Bill Parcells famously picked one rookie every year, usually the team's first-round draft choice, to be his personal water boy.

Other famous hazing activities include a rookie talent show, where each rookie must perform a skit, sing their college fight song, or perform some other embarrassing task. There are also the traditional bad haircuts administered by team veterans. In 2012, one rookie on the Miami Dolphins was given a haircut shaped to resemble a penis.

These pranks may seem like harmless fun meant for a little bit of team bonding, but many hazing rituals have more real-life impacts than short-term embarrassment.

However, coaches such as Steelers coach Mike Tomlin and former Colts coach Tony Dungy are very strict about hazing, placing limits on the extent of meal buying and banning traditional activities like taping rookies to the goal posts overnight.

The problem is that many

coaches do not like to police their locker rooms and instead leave that role to the team leaders. When those leaders are players like Incognito, though, things can get out of hand quickly.

Incognito's behavioral problems were first reported in 2002 when he was suspended from a game for spitting on another player during his first year at the University of Nebraska. Despite his baggage, he was drafted by the St. Louis Rams in the third round. He played for the Rams until

versity, Incognito was asked to toughen up the rookie.
It was during this tough-

ening-up process that Martin cracked. Back in April, Incognito left Martin a voicemail at a coach's behest after Martin chose not to attend voluntary team workout activities. According to ESPN's Adam Schefter, Incognito directed racial slurs and expletive-laced threats toward Martin and his family.

Martin finally left the team after an entire table of teammates stood up and left when

Coaches at the youth, middle school, and even high school levels must do more to ensure that the relationship between players is one of camaraderie and mentorship instead of harassment and hazing.

2009 and earned a reputation as the league's dirtiest player.
While his anger problems

While his anger problems caused issues off the field, they also made him a great football player. His on-field performance resulted in a Pro Bowl invitation in the 2012 season and more. He was voted onto the Dolphin's leadership council, and when a shy Martin was drafted out of Stanford Uni-

he went to sit down with them at lunch. Martin allegedly smashed his tray of food on the table and walked out of building with little intention of returning.

While it would be easy to make this a black-and-white issue of bullying, the environment surrounding football, the Dolphins, and even Martin are not without blame.

courages unconstrained anger. The NFL has no mention of bullying or hazing in its agreement with the NFL Players Association.

Football is a sport that en-

There has never been an effort by the NFL to address this problem within its own locker rooms and within the lower ranks of football.

The Dolphins' organization has also come under pressure for its extreme negligence. If the allegations are true that some of the coaching staff encouraged Incognito's emotional taunting of Martin, there must be swift and harsh retribution.

Nevertheless, there was still a major institutional breakdown that should at least result in a massive house cleaning by the Dolphins, with all new coaches and possibly even players being brought in.

Martin's role in this scandal is the most quizzical. As the story continues to develop, it appears that Martin did more than just sit silently as he was harassed by Incognito. He responded to Incognito in a similar fashion. One text from Martin to Incognito contained a meme with the text, "I will murder your whole f****** family," over a macro of a woman laughing with a dog in her hand.

This is not a problem that

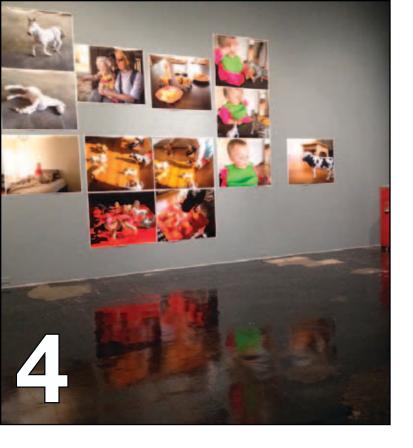
will be quickly solved. Incognito and Martin were the two players that brought this issue to the forefront, but there is a large cultural and institutional problem in play. Football is a game about utilizing anger and aggression and turning them against your opponent in as physical a manner as possible. Since this aspect of the game appears to be unchange able without losing much of the physicality that makes the NFL so popular, there must be another way to handle the aggression when the players are off the turf.

The solution will require a massive paradigm shift in how the NFL treats its players. But as with health concerns, these changes need to come from the bottom. Coaches at the youth, middle school, and even high school levels must do more to ensure that the relationship between players is one of camaraderie and mentorship instead of harassment and hazing.

As hazing is cracked down on in colleges across the nation, it is critical to set a good example of how to treat those younger than you. It's hard to tell college and high school students that hazing and bullying is wrong when their role models do it in front of cameras with encouragement from their bosses and leaders.







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CMU students create jazz fusion

Mariko Reid Quintet mixes musical skill with energetic performances

On Thursday night, Carnegie Mellon students took Shadyside bar and restaurant Up by storm. The Mariko Reid Quintet played a series of jazzy pop classics ranging from a reworked version of "Once Upon a December" from the animated film *Anastasia* to old hip-hop favorites like "Just a Friend." The group has described themselves as the "trippinest, hippenest, flippenest, swaggiest, steaziest jazz-funkhiphop-RnB-neo-soul-post-modern-sonic-exploration."

The group is made up of five wildly talented Carnegie Mellon musicians: senior vocal performance major Mariko Reid, junior mechanical engineering major Matt Powell-Palm, junior composition major Stephen Murphy, senior information systems major Chris Lindsay, and senior double bass performance major Vince Galvan, standing in for Sam Lavery, a master's student in human-computer interaction. Each performer contributed a layer that complemented the next. Reid's talent easily translates from one genre to another: She has a strong voice cut with emotion that rises above her fellow musicians. On saxophone, Powell-Palm added a layer of smooth to the music that wasn't showy: It built well, driving him into a state of shoulder-shuddering and feet-stomping vigor.

Chris Lindsay was remarkable on the drums. As Powell-Palm put it, "Drummers that talented at that age don't exist in the world; he is so uniquely and phenomenally talented." Lindsay's solos were jawdropping, as was the control he displayed. He moved the music in a natural and masterful way that pulled listeners in. Steven Murphy on piano also kept the arrangements moving with energy, enthusiasm, and skill, while Galvan on bass added a bottom layer that pulled the parts together.

The group's arrangements as a whole were fun, young, and alive. The feeling was very organic; the music grew in a loose process that the group attributes to the way it builds arrangements and creates shows as a whole. The venue was entirely engaged in calling out and dancing; listeners couldn't avoid tapping their feet or bobbing along, at the very least. The group strives for this level of energy

at all its performances. At a past show, according to Powell-Palm, he and a few audience members even got up and danced on tables.

It wasn't only the quintet that performed that night: Audience members read slam poetry, freestyled, and sang with the band. Everyone was phenomenal and embraced the opportunity to join in. It was like stepping into a community in which every person standing next to you has some wonderful hidden talent, even if they didn't get up and show it.

The community accurately reflected Carnegie Mellon, especially at the end of the show with the band's performance of "Just a Friend," which engrossed the whole room in freestyles, harmonies, and dancing.

The Mariko Reid Quintet has made a name for itself with shows around Pittsburgh, collaborations with local rappers, and an album compiled during last year's SPIRIT fashion show. As the group members put it, the spring semester will "be poppin'." Two of the members are in their senior year, and their plan is to go hard to the end — continuing to play, exploring the avant-garde genre, and trying to contribute to the music scene here at Carnegie Mellon.

This growth seems inevitable with Carnegie Mellon's concentration of talented musicians inside and out of the College of Fine Arts, as well as the ability of music to "really just improve everything," according to Powell-Palm. Powell-Palm spoke of "music to be an interactive experience" that is "good for the soul," and of the quintet's efforts to provide just that. The group will play another show at Up in December and plans to continue to perform there. These performances are definitely worth attending as open opportunities to engage with some great music. The Mariko Reid Quintet is a group to look out for in the future.

Gwen Luvara | Junior Staffwriter

Editor's Note: Matt Powell-Palm is a junior staffwriter for The Tartan.



Photo illustration courtesy of Daniel Kilkelly via the Mariko Reid Quintet

The Mariko Reid Quintet, comprised of Carnegie Mellon students across multiple disciplines, combines an array of genres including jazz and hip-hop in energetic and crowd-pleasing performances.

Advice for awkward people

On napping and sleeping — very different things

Dear Matt and Ryan,

Recently, in some of my classes, the people sitting next to me have been falling asleep on me. As long as there's no drool involved, I'm okay with it. But in every one of my classes this week someone actually fell asleep on my shoulder. Not the same people, not the same seats, nothing. Once, I was even unwittingly thrust into a sommeil à trois. Why is this happening to me?

Sincerely,
Sleepiness Has Other
Undergrads Leaning
Deeply, Ever-Ready
Provider Is Less Loving Of
Weirdos

Dear SHOULDER PILLOW,

I'm sorry to say this, but it sounds like you just have some really comfortable shoulders. You have options, though. If you get to class late enough so that most of the seats are filled, pick an empty one next to someone who looks pretty awake. You could also keep them awake by nudging them, under the pretense of, "Hey man, this is important stuff. The prof said it'll be on the test!" Fear is a powerful motivator. If you're looking for an extreme option, put an air horn in your pocket and attach the trigger to your shoulder pad. And when the inevitable happens, pretend like you didn't notice anything.

There's nothing wrong with saving your shoulders for marriage, Ryan & Matt

Dear Ryan and Matt,

Throughout the semester, I've been timing my daily naps so I have a corner of the library all to myself. It's been great - I wake up full of energy and ready to tackle the rest of my day. Only problem is that in the past week, someone has been sleeping in my spot! I don't want to be mean and pop a balloon to wake him up, but I want my spot back! Any suggestions?

Thanks, Barren Afternoon Bed Yielded, Bang to Effect Anticipated Rest

Dear BABY BEAR,

We're sure Goldilocks has been having as rough a week as you have. It isn't worth being a jerk just to get your nap time back. Besides, you said you have a whole corner of the library floor to yourself; what's sharing it with one other person? You can think of him as your midday roommate - chances are you two will be asleep at the same time and won't even be conscious of the other's existence. But if you want to be cruel, put his hand in your warm coffee.

Sweet dreams, Matt & Ryan

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



SPACE exhibit packs a photographic punch

Behind the Scenes showcases emerging photographers with a variety of pieces

Photography occupies a realm both outside and within the confines of the contemporary art world. In this digital age, we encounter photography more than any other art medium. The vivid "realness" of a digital image, however, can create difficulties in distinguishing what a photograph is and what it isn't.

In the SPACE gallery in downtown Pittsburgh, a photography exhibition curated by Carnegie Mellon alumna Jen Saffron (CFA '91) explores the limits and abilities of photography through installation, which uses site-specific pieces to transform the meaning of the space. Featuring the work of five mid-career photographic artists, the exhibit explores how photography opens both figurative and literal lenses to new perspectives.

In conceiving the exhibition, Saffron began with an interest in exploring what constitutes a photograph. "The trick of photography is that it can take the three-dimensional and display it as two-dimensional, but it flattens out the original in the process. What's more, photographs are therefore always a representative of the past, not the present."

Although it is conceptually driven, Saffron emphasizes that this show is not a contemporary art show but rather a photography show — an important distinction, given the long history of photography as a medium with its own rules and boundaries separate from the art world.

The photographers involved are Nancy Andrews, Dennis Marsico, Annie O'Neill, Barbara Weissberger, and Carnegie Mellon adjunct professor of history Leo Hsu.

Unlike many SPACE shows, says Saffron, this exhibition is not about showcasing contemporary emerging artists with novel ideas, but rather a platform for

established, mid-career professionals who have a deep knowledge of the practice and experience. Between the five of them, they have a profound understanding of photography as an interdisciplinary medium.

Hsu's work in the show, a series titled *Free to the People*, focuses on the subject of the library, exploring it as a unique, semi-public space. His work for the project began in 2010, when the "library was in crisis," and branches all around the nation were closing down and reducing hours due to overwhelming budget cuts.

Hsu's strong personal connection to libraries motivated him to explore the space of the library conceptually through photographs. "I have always really loved and appreciated public libraries, and Pittsburgh itself has a long history of libraries with the Carnegie Library." Hsu views libraries as a special space in an otherwise commercialized culture — one of the only places meant to be simply inhabited by all with no motivation to buy or sell.

Hsu's photographs genuinely capture people at ease in the library and feature a range of subjects diverse in age, race, and expression. By taking an installation approach, Hsu's photographs are given content that reflect his social ideas of the importance of libraries, and recreate the feeling of a library within the gallery environment. His work occupies a comfortable nook and takes a literal approach to recreating a library environment, highlighting a table, chairs, bookshelf, and couch that could have been straight out of Hunt Library.

The works of the four other photographers take a variety of different approaches. A travel photographer for *The New York Times, Travel*, and *Leisure*, Marsico's project titled *Age Specific* focuses on exploring the issues confronting the 1960s generation of youth-centric



Sarah Moss-Horwitz | Junior Photographer

The latest exhibition at the SPACE gallery features work by a variety of photographers.



Sarah Moss-Horwitz | Junior Photographe

Carnegie Mellon adjunct professor of history Leo Hsu's photo series *Free to the People* focuses on the library as a unique space.

ideology over 50 years later by juxtaposing portraits of a middle-aged woman with those of an infant.

O'Neill, a veteran photojournalist for *LIFE* magazine and the *Pittsburgh Post-Gazette*, and Andrews, an award-winning journalist and renowned former staff photographer at the White House, also have work in the show.

A photographic artist with a contemporary art background, Weissberger's work approaches photography in an unusual way, creating digital photographic collages that distort real objects, challenging our ideas of perspective with images that generate organic abstractions out of simple subject matter.

Taken as a whole, the exhibition demonstrates that in spite of the overwhelming role photographs now play in a world where everyone has a smartphone and a camera, photography can still be a powerful tool when pushed to its limits. The idea that a photograph can only be a record of the past challenges our obsession with self-documentary; taking an installation approach shows all the aspects that are lost in the process of taking a photograph. Additionally, the role of the fourth dimension, time, in understanding the meaning of a static image is also addressed as the artists attempt to push the media.

The exhibition is a collaborative effort mounted by SPACE gallery in collaboration with the Pittsburgh Cultural Trust. *Behind the Scenes* will be showing through Jan. 26.

Sarah Moss-Horwitz | Staffwriter

Voice professor juggles teaching, performing

Aylmer inspires students with enthusiasm for teaching despite constant travel

Last year, the College of Fine Arts gained a new faculty member in assistant professor of voice Jennifer Aylmer.

Born in Long Island, New York City, Aylmer — a soprano — grew up wanting to sing, commenting, "I always wanted to be an entertainer, and music just happens to be what I do best." Contrary to what one would assume, she did not enter college knowing she wanted to sing opera. "I discovered there were hundreds of years of music that I had not yet thought to discover, and it's worth discovering, so I ended up in the classical field," she said.

After receiving her bachelor's degree from the Eastman School of Music, Aylmer began her master's degree at The Juilliard School. However, she did not complete her master's and instead chose to enroll in the Juilliard Opera Center, after which she became a young artist at the Houston Opera School.

"Eastman was a very intensive academic program," Aylmer explained, "and I really wanted more performance experience."

The experience certainly paid off, as Aylmer successfully launched her opera career in 2005 with a debut in Tobias Pickler's An American Tragedy at the Metropolitan Opera in New York City. Aylmer has since performed many roles, including Susanna in The Marriage of Figaro, Despina in Cosi fan tutte, Berta in The Barber of Seville, Gretel in Hansel and Gretel, and Kathie in The Student Prince.

Aylmer mainly sings in English and Italian, but she enjoys performing in all languages and finds Czech to be the most difficult to sing. When asked which language she prefers to hear, Aylmer gave a different response: "I prefer to listen to great singers singing great operas."

The life of an opera singer may be taxing, but the life of an opera singer who also teaches and holds recitals is especially difficult. "The travel schedule can be really grueling," Aylmer said. "If you're doing back-to-back performances, you may be living out of a suitcase for six, seven months at a time."

In fact, although Aylmer teaches here at Carnegie Mellon, she calls Brooklyn, N.Y. home. It is a career of constant flights and long drives. "It can be a lonely life," admits Aylmer, "but ultimately, it can be really rewarding and very fulfilling."

Despite the fact that Aylmer is constantly traveling for performances, a handful of Carnegie Mellon students have the honor of calling her their teacher.

"I love teaching, I love music, and I love being able to share what I've experienced in my life with the next generation of singers. Honestly, discovering repertoire through my students is like recharging my artistic battery," Aylmer said.

Her students think very highly of her. Campbell Rogers, a junior Bachelor of Science and Arts student in mathematics and vocal performance (and a mezzosoprano) said, "Her talent inspires me to be the best student that I can be and learn as much from her as I can while I'm here."

When she isn't singing in a large-scale performance or teaching at Carnegie Mellon, Aylmer holds recitals. Alymer gave her latest recital at Carnegie Mellon on Nov. 8 in Kresge Theatre, where she performed a series of 20th century pieces with composers ranging from Eduard Toldrà and Richard Strauss to Dmitri Shostakovich and Kevin Puts.

Planning a recital takes a lot of work, Aylmer explained, but in many ways, recitals are more fun than operas because "in a recital, you can just be yourself. You can just tell stories that appeal to you. And you can just use the words of somebody else to express how you feel."

Aylmer urges her students to say what they want to say through both the music and the text when choosing their own repertoire. She compares the repertoire of a recital to a five-course meal: "You want to start with something that hits your palate and makes you feel good, and then you have a refresher, or a different taste experience, and then, before the big protein, you might want to have a little soup, a little salad, then you get the meat of the program."

Even when she is not acting out a particular persona during recitals, Aylmer maintains a fun personality, giving character to her songs and leaving an emotional impact on the audience. It is often difficult to make the audience laugh and cry through song, but Aylmer certainly managed to do so at her Nov. 8 recital. This personality that Aylmer instills in her music is purely her own, but she mentions multiple role models who have affected her as a singer, including Masako Toribara, a former lecturer of voice at Eastman, and Rita Shane, a

former leading soprano with the Metropolitan Opera.

Overall, Aylmer believes that there are many paths to success. "For me, I would like to feel fulfilled in what it is I am doing at that time. At this stage of my life, I feel that I've earned the right to enjoy my own experiences artistically."

Despite these difficulties, Aylmer still finds time to balance family and friends with her musical life. In the near future, Aylmer will be singing a recital at Virginia Tech, teaching a masterclass at Shenandoah University in Virginia and one in Washington, D.C. — and of course, working with her students at Carnegie Mellon.

Aline Naroditsky | Junior Staffwriter



Courtesy of Jennifer Aylmer via ADA Artists

Jennifer Aylmer leads a hectic but fulfilling career as both a performer and an assistant professor of voice at Carnegie Mellon. Outside the classroom, Aylmer frequently holds recitals, the most recent of which took place in Kresge Theatre on Nov. 8.

November launches holiday film season

Don't miss these upcoming movie highlights, from indies to Oscar potentials to family films

With Christmas displays up since two weeks before Halloween, the holiday movie season is almost upon us a little sooner than usual. The month between Thanksgiving and Christmas is one of the biggest times of the year for Hollywood, with studios releasing everything from Oscar bait to big-budget epics and family films. While it may be hard to see everything on your list this season, here are a few films that are definitely worth the trip to the theater.

The Hunger Games: Catching Fire

The second film adaptation of Suzanne Collins's popular book series, The Hunger Games, finds Katniss Everdeen (Jennifer Lawrence) once again facing seemingly insurmountable odds. After winning the 74th Hunger Games, she is given little time to rest with next year's games on the horizon and rebellion brewing in the districts. Katniss and her fellow winner, Peeta Mellark (Josh Hutcherson), both hope to survive the evergrowing tensions across the post-apocalyptic nation of Panem. Featuring a supporting cast including Woody Harrelson and Philip Seymour Hoffman that complement the youthful leads, The Hunger Games: Catching Fire should be a strong continuation of the series.

Inside Llewyn Davis

Inside Llewyn Davis, the latest release from stellar writer/ director pair Joel and Ethan Coen, focuses on young folk singer Llewyn Davis (Oscar Isaac) as he searches

for guidance and direction amidst the early 1960s Greenwich Village folk scene. Based on the life of folk singer Dave Van Ronk — who was overshadowed in history by friends such as Bob Dylan — the film boasts a solid cast that includes Justin Timberlake, Carey Mulligan, and John Goodman. If you're looking for a peek into this film beyond the trailer, check out the already released soundtrack, produced by legend T Bone Burnett, featuring both covers of folk songs from the era as well as original material.

Saving Mr. Banks

Dec. 13

Saving Mr. Banks tells the story of how Walt Disney (Tom Hanks) convinced author P.L. Travers (Emma Thompson) to sign over the film rights to her beloved character Mary Poppins, which she did with great reluctance that eventually turned to great regret. While the Disney Company's hand in the making of the movie may be a sign that there will be heavy Walt Disney worship and multiple scenes that inexplicably take place at Disneyland, the film has already garnered a lot of early acclaim. Featuring a supporting cast that includes Paul Giamatti, Jason Schwartzman, and Colin Farrell, Saving Mr. Banks may just be the childlike tug your heartstrings will need this holiday season.

Her

Dec. 18

Written and directed by Hollywood iconoclast Spike Jonze, Her tells the story of Theodore Twombly (Joaquin



Phoenix), a lonely man who falls in love with the female voice (Scarlett Johansson) from an advanced computer operating system. Jonze, whose previous films include Adaptation, Being John Malkovich, and Where the Wild Things Are, has a certain knack for telling these kinds of quirky tales, and Her will mark his solo screenwriting debut. In addition, the film's soundtrack comes courtesy of none other than indie rock icons Arcade Fire, solidifying Her's stance as the most indie movie you'll see this holiday season.

Anchorman 2: The Legend Continues

It's been nine years, but the Channel 4 News Team is lathering on the Sex Panther and downing a last glass of scotch to return for a new adventure. Details are hush-hush, but the sequel, once again written by star Will Ferrell and director Adam McKay, will see the return of the original cast as well as a nearly endless list of supporting roles and cameos that includes Kanye West, Sacha Baron Cohen, and Harrison Ford. Among the films to be released this holiday season, none looks more fun than Anchorman 2. Look for this film to shed a little afternoon delight on otherwise bleak winter days.

The Wolf of Wall Street

Dec. 25

Based on the memoir of the same name, The Wolf of Wall Street is the story of how young Jordan Belfort (Leonardo DiCaprio) fell under the spell of the bustling '90s Wall Street, started a trading firm called Stratton Oakmont, made millions using highly illegal trading schemes, and thought he was utterly invincible throughout. As anyone would probably guess, the FBI wasn't quite as taken in by his charm as others were. With the dream team of DiCaprio, director Martin Scorsese (The Departed, Goodfellas), and a screenplay by Boardwalk Empire creator Terence Winter — as well as a stellar supporting cast that includes Jonah Hill and Matthew McConaughey — The Wolf of Wall Street promises the sky and will most likely deliver. If you can only see one movie this holiday season, it should be this one.

Joey Peiser | Assistant Pillbox Editor

Josh Hutcherson (left) and Jennifer Lawrence promote one of the most highly anticipated film releases this season, The Hunger Games: Catching Fire.

Thor 2 offers dazzling visuals, problematic plot

The newest Marvel film surpasses its predecessor in many ways, but still has issues

Warning: This article contains spoilers for Thor, The Avengers, and Thor: The Dark World.

If you go to see *Thor: The Dark World*, prepare to get hammered by stunning visuals and intense action sequences. The newest Marvel film, a sequel to 2011's *Thor*, was released last Friday.

The film follows Thor (Chris Hemsworth), a character based on the Norse god of thunder, and his mortal love Jane Foster (Natalie Portman) as they fight the forces of Malekith (Christopher Eccleston), the Dark Elf. Malekith is after a force known as the Aether, which Jane accidentally gets tangled up in when the boundaries between the nine realms of the universe are weakened.

A large part of the film takes place on Asgard, Thor's home, which provides a beautiful backdrop and a welcome change from the almost entirely Earth-bound Marvel universe. Asgard is filled with flowing water and grand buildings, all set against the vast expanse of outer space.

The story is pretty straightforward with requisite action sequences peppered throughout. The events all lead up to a phenomenon called the convergence, when the gateways to each of the nine realms line up and become visible to the eye.

In addition, weak spots in the boundaries will transport anything that goes through them to another realm.

These weak spots make the final battle especially



exciting: Thor battles Malekith while they tumble and fall through random portals into the other realms.

While the premise of this film is stronger than its predecessor's, the story is halting at points because there is almost too much going on at once. Odd lines of dialogue end scenes awkwardly and a hint at a love triangle is never fleshed out or directly addressed.

On that note, although the romance between Thor and Jane sets the action in motion, there's no real depth to the relationship. For all the screen time the pair has, they never address the major issue between them: the fact that Jane is mortal and Thor will live for thousands of years.

Granted, they are in the midst of fighting evil, but everyone else around Thor brings it up, from his estranged brother Loki (Tom Hiddleston), to his father Odin (Anthony Hopkins), to his friend and implied love interest Sif (Jaimie Alexander).

Exposition is another subtle problem throughout the film. At the end of *Thor*, the Bifröst, a bridge between the various realms, is destroyed, trapping Thor in Asgard and separating him from Jane.

Thor was then seen in *The Avengers*, with no explanation as to how he got there or whether the Bifröst had been repaired. He did not reconnect with his lover until the beginning of *The Dark World*, and only then it was because he feared for her safety. Furthermore, there was almost no explanation as to how the Bifröst was repaired — only that Thor and his friends were fighting battles to restore order.

Too much exposition can kill a story, but perhaps a little more in the film would clear up a major question. The

filmmakers could have replaced the ill-conceived love triangle with something that clarified or even furthered the story.

Acting-wise, Hiddleston stole the show again, portraying the trickster Loki with an electrifying mix of vulnerability and aggression. In one particularly memorable scene, Loki and Thor fight just like normal brothers, and Loki's sharp wit matches each of Thor's barbs.

Hemsworth excellently portrays Thor's strength and fighting skills and transitions to more emotional scenes fairly well. Because he has chemistry with Portman, the filmmakers could have played up the relationship a little more, fleshing out who they are as a couple, since they haven't actually had any time to do so.

Portman has a more challenging role than in the previous film, since she is suddenly thrust into another realm, but she fails to instill any reaction to this change in her character. Upon first stepping into Asgard, Jane seems unfazed by the glowing rainbow bridge and vast kingdom that lies in front of her.

In a film in which not everything is quite what it seems, one of the highlights is a character's surprise appearance. It stayed under wraps very well, and is a nice nod to previous Marvel films. Make sure to stay through all of the credits so you don't miss either of Marvel's trademark bonus scenes.

Thor: The Dark World is a hearty sequel, serving up equal parts drama and action and even a bit of lighthearted humor at points. While imperfect, it proves to be entertaining enough for viewers to leave them on the edge of their seats, waiting for the next installment.

Mairéad Pettit | Staffwriter

McConomy Auditorium, University Center

Andie Park | Staffwriter

The Way Way Back

Friday, Nov. 22 7:30 10

This coming-of-age story is about a teenage boy forced to go on a road trip with his family. Think you've seen this a million times before? Think again. The Way Way Back twists the traditionally overwrought narrative of the teenager and makes it funny and heartwarming. What starts out as an overbearing and obligatory family trip for 14-year-old Duncan (Liam James), his mother (Toni Collette), and her not-so-friendly boyfriend (Steve Carrell) becomes a summer Duncan will never forget. Filled with incredible charm from its cast as well as its genuinely witty script, The Way Way Back is a fresh trip back to our younger years.

Elysium

Saturday, Nov. 23 7:30 10

It's the year 2154, and the world is in ruins. Overpopulated and riddled with crime, Earth has become a dystopian hellhole for the majority of the human race, while the top tier has relocated to the pristine man-made station called Elysium, where health and wealth are reserved for the elite. The people of Earth are desperate for health care and hope to escape their seemingly hopeless world until an ordinary citizen named Max (Matt Damon) emerges as their one chance to bring justice. From the visionary director of *District 9*, Neill Blomkamp, *Elysium* is filled with jaw-dropping images and thrills that surpass the traditional blockbuster archetype by becoming a relevant commentary on current political arguments. Damon carries this heavy-handed film, making it entertaining and eye-opening.

School of Drama puts on a classic American comedy in You Can't Take It With You

The ongoing School of Drama centennial production features a stellar cast of senior acting and musical theater students, who rose to the challenge of playing '30s-era characters

by **Jenna Bodnar** | Junior Staffwriter

Everyone has that one family member who is a few cents short of a dollar, or is a little eccentric. Imagine having an entire family like that — and then bringing your boyfriend home to meet them.

The shenanigans that ensue are the subject and source of hilarity of George S. Kaufman and Moss Hart's You Can't Take It With You, a Pulitzer Prize-winning

The Great Depression

The world of You Can't Take It With You is heavily grounded in the struggles of the Great Depression. Beginning with the infamous stock market crash of 1929, the Depression left one in four Americans jobless and stifled the nation's once-growing economy.

1933 was the single worst year of the Depression, with America's gross domestic product at a level half of what it had been four years earlier. However, also that year was the election of the man who would give the country hope, Franklin Delano Roosevelt. Roosevelt created a multitude of new programs and agencies that put Americans back to work as part of his "New Deal."

By the outbreak of World War II in 1941, America was almost completely back on its feet, with much of the New Deal legislation to thank for it. The Roosevelt administration thus figured prominently into the daily lives of many Americans, a fact given significant attention in You Can't Take It With You.

American play being performed in the Philip Chosky Theater in the Purnell Center for the Arts.

Despite the fact that Kaufman is a Pittsburgh native, this play has not been performed on Carnegie Mellon's campus since 1947. However, as director Barbara Mackenzie-Wood said, "When Peter Cooke asked for suggestions for the 2013–14 season, a year to be spent in celebration of the School of Drama's 100-year anniversary and the very best of classic American drama, my first thought was that such an undertaking would not be complete without the inclusion of Kaufman and Hart's You Can't Take It With You. It is the classic American comedy."

Seeing as the house was packed with a raucous audience at this Saturday's matinee performance, Mackenzie-Wood's choice was well founded.

Written in 1936 at the tail end of the Great Depression, You Can't Take It With You is the heartwarming story of the pandemonium of Alice's eccentric family meeting her fiance's uptight parents. In a time when scarcity was the norm, Alice's family is more concerned with simple joys than an accumulation of wealth.

As the the program says, "The play was — and is — a slap in the face to the mentality of depression and defeat."

While the entire cast puts on an excellent performance, certain characters stand out. From the moment the curtain rises, senior acting major Rachel Keller is delightful in her role as Penny, a loving mother who enjoys expressing her artistic side and has been writing plays ever since a typewriter was accidentally delivered to the house. Keller brings her own personal touch to the character, capturing viewers' attention and making them laugh with her quirky mannerisms and well-timed inflections. The onstage chemistry between Penny and the other family members makes her the cohesive force of the family and a pleasant character to watch.

The character that truly embodies the message of You Can't Take It With You is Martin Vanderhof, more affectionately known as Grandpa. Senior musical theater major Joey Ventricelli gives a thought-provoking performance while maintaining the comedic tone of the play. Even though he is surrounded by amusing antics, Grandpa manages to keep pace with the younger members of his family through quick, witty quips.

"It was a lot of hard work, very technical, dated. I had to do a lot of research to understand the references that were made in the jokes. But overall it was so much fun to bring this era to life to a modern audience. It was a fun show to be a part of," Ventricelli said.

An equally comical yet more flamboyant character is Boris Kolenkhov, an ostentatious ex-Soviet turned ballet teacher, brought to life by senior musical theater major Michael McGuire. McGuire enlivens the character with his spot-on Russian accent, animated gestures, and energized delivery. He had the audience enraptured and roaring in laughter, especially in his interactions



Courteau of Dannia Schahatta

School of Drama students portray an eccentric range of characters in *You Can't Take It With You*. Pictured from left is Alice's brother-in-law Ed (Mitch Marois), his wife Essie (Michelle Veintimilla), Essie's ballet teacher Boris (Michael McGuire), and Boris's friend Olga (Claire Saunders).

with endearing Essie (senior acting major Michelle Veintimilla), his aspiring acolyte.

"[The play] was much tougher than you might think because it seems so easy but it's so precise," McGuire said. "It's the hardest play I've had to do. It's pretty special." Senior acting major Claire Chapelli, playing the character of snobby, uptight Mrs. Kirby, also saw the task as daunting yet rewarding. "The rehearsal process was challenging because everything was so specific, but it was great to see it on stage and hear the audience laugh. The audience is really like another character," she said.

Chapelli also mentioned that the props and sets used for this production stay true to the original. The elaborate and colorful sets solidify the late 1930s air — so much so that they elicited applause from the audience when the curtain first rose.

In addition to the period set and props, the experience of seeing the play hearkens back to the decade in which it was originally written and produced. The disembodied voice of a cast member brings the audience into this era with a time-period-appropriate introduction, asking viewers to take note of the fire exits and turn off all cell phones in true 1930s jargon. Furthermore, jazz music serenades the crowd as the scenes transition from one to the next.

Mackenzie-Wood "decided to present this revival as closely as possible to what audiences might have seen at the Booth Theater in New York City in 1936 in the seventh year of the Great Depression" in order to preserve the timelessness of *You Can't Take It With You*. Despite the large gap between decades, the cast and crew have created a truly cohesive experience of the time period.

McGuire found putting on a comedy to be a welcome change to the typically darker, more somber repertoire of the School of Drama, giving the 100-year celebration a well-rounded selection.

Senior musical theater major Mitch Marois, who played Essie's husband Ed, agreed, saying, "The play is heartwarming with a distinct style. It is a good contrast to *The Crucible*." The decision to add something different to the usual lineup adds timely variety to the School of Drama's selection for the 100-year anniversary.

The Carnegie Mellon University School of Drama's performance of *You Can't Take It With You* is a professionally executed production of a timeless American piece. The acting is convincing, inducing both slapstick humor and leaving the audience with a bit of food for thought. The characters' flamboyant actions and the ornate sets provide visually stimulating entertainment. It is successful across the board, crafting both an accurate portrayal of Great Depression era America and a loveable, quirky family with which audiences can relate.

You Can't Take It With You will run through Saturday at Chosky Theater.

Cast of Characters

Grandpa: Joe Ventricelli

Penny: Rachel Keller

Alice: Zanny Laird

Tony: Chris Douglass

Paul: Carl Lundstedt

Essie: Michelle Veintimilla

Ed: Mitch Marois

Mr. DePinna: Antonio Marziale

Kolenkhov: Michael McGuire

Henderson/G-Man: Joe Mendick

Mr. Kirby: Jacob Vine

Mrs. Kirby: Claire Chapelli

Rheba: Nicky Robles

Donald: Jordan Phillips

Ms. Wellington/Olga: Claire Saunders

daunders

G-Man: Sam French

G-Man: Patrick Zakem

3-Wall. Fathick Zakelli



Party music from the 19th century.

A Waltz Tradition November 29 & December 1, Heinz Hall

Waltzes and polkas from the 19th century are celebrated today as a part of our modern culture. Join us as The Pittsburgh Symphony Orchestra and music director Manfred Honeck present lively works from Suppé, Beethoven and Strauss, with guest pianist Till Fellner. Whether you're with the whole family or a group of friends, A Waltz Tradition is a great way to celebrate the Thanksgiving season in Pittsburgh.



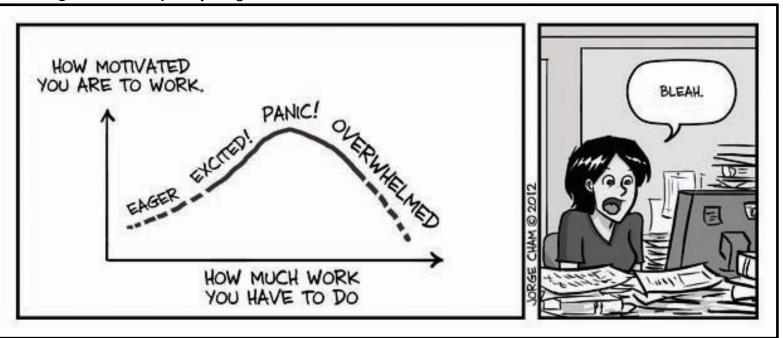
Hark, A Vagrant by Kate Beaton



kathrynmoira@gmail.com

harkavagrant.com

Piled Higher and Deeper by Jorge Cham



jorge@phdcomics.com

phdcomics.com

Email Signatures by Doghouse Diaries

SEVEN USES OF THE EMAIL SIGNATURE To let people know your messages will be short, poorly typed and possibly incorrectly autocorrected. Sent from my mobile device. To let people know you work for a paranoid company that has also interestingly put trust in you to send confidential information via email: This email and any files transmitted with it are confidential and intended solely for the use of the individual or entity to whom they To let people know you are addressed. If you have received this email love quotes. Consider in error please notify the system manager. me informed. To let people know how to track you down incase you get kidnapped. Email@address.com + Cell 555-555-1111 + Home 555-555-2222 • Work 555-555-3333 • Blood Type A+ • Click to see my current To show how much you location . I keep a key under the rug of my like colors. Answer: you front door. like them a lot. To show people you're so tech savvy that you know how to embed HTML in your signature so your company's logo will display. Looks like the search for my new web developer is over. To keep a public list of every online service you've ever signed up for. Thanks for all the ways I won't be keeping in touch with you.

doghousediaries@gmail.com

thedoghousediaries.com

Poorly Drawn Lines by Reza Farazmand



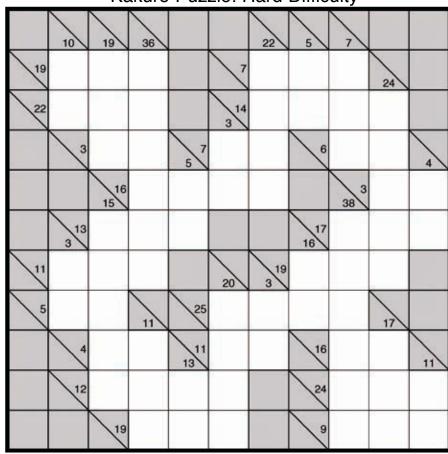
poorlydrawnlines@gmail.com

poorlydrawnlines.com

Sudoku Puzzle: Easy Difficulty

Sudoku courtesy of www.opensky.ca/~jdhildeb/software/sudokugen/

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 above it. No number may be used in the same row or column more than once.

Solutions from Nov. 11

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Crossword

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20	7	1	21	4	5	22	14	6
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4	50	51	1	7	13	36	9	37
29	25	52	8	15	8	9	30	53
6	54	55	56	2	9	31	24	57
44	10	1	45	16	27	6	38	46

Hard Difficulty

	18	39			7	16		
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Medium Difficulty

Horoscopes

aries

march 21-april 19

You should always try to bend the rules, but some might break easier than others.

taurus

A true magician never reveals his secrets.

april 20-may 20

gemini may 21-june 21

The answers you have been searching for will suddenly

cancer june 22-july 22 The tighter you hold onto sand, the faster it slips through your fingers.

leo

Don't question whether the things happening to you are real or not; just enjoy them.

virgo aug. 23-sept. 22

july 23-aug. 22

Sometimes it all comes down to who you know, not what you know.

libra sept. 23-oct. 22 Don't be disappointed if you fail to reach your goals — you set your standards too high.

scorpio oct. 23-nov. 21

You're past the worst. Now you can relax.

sagittarius nov. 22-dec. 21

Stop being so restless, and be glad you get to do something important.

capricorn dec. 22-jan. 19 It's time to put your needs before the needs of others.

aquarius jan. 20-feb. 18 When you feel average, just remember that the combination of things that had to happen for you to exist is unique.

pisces feb. 19-march 20

Don't get too caught up in the details or you might miss the big picture.

Kairavi Chahal | Comics Editor

1	2	3	4			5	6	7	8		9	10	11	12
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Crossword courtesy of BestCrosswords.com

ACROSS

- 1. As to
- 5. Vaporize
- 9. Taylor of "Mystic Pizza"
- 13. Gallows loop
- 15. Title bestowed upon the wife of a raja
- 16. Primordial giant in Norse myth
- 17. Actor Keach
- 18. At the apex of
- 19. Room in a casa
- 20. Like some ears
- 21. ____-a-Sketch
- 23. System of aircraft navigation
- 25. Swing around
- 26. Sloping letter
- 27. Kelp
- 30. Latin word meaning "nothing"
- 31. Ancient linear unit
- 32. Pertaining to tactics
- 37. Give ____ for one's money
- 38. Imbibe
- 40. Achy
- 41. Unnoticed
- 43. Functional
- 44. I tr. holder
- 45. Real-estate dealer
- 47. Idle talk
- 50. Actress Sommer
- 51. Mother of Calcutta
- 52. ___ silly question...
- 53. Class
- 56. 500 sheets
- 57. Scott of "Charles in Charge"
- 59. Kidney enzyme
- 61. Years in old Rome
- 62. Lounge
- 63. "Who's there?" reply
- 64. Floor coverings
- 65. Ultimatum word
- 66. Completed

Down

- 1. Part of MIT
- 2. Don't look at me!
- 3. Horse of mixed color
- 4. PC panic button
- 5. Supported
- 6. Sworn thing
- 7. Daughter of Cadmus
- 8. Lip cosmetic
- 9. Disinfectant brand 10. Japanese porcelain
- 11. Light purple
- 12. OPEC member 14. Grommet
- 22. Calendar abbr.
- 24. Sentry's shout
- 25. Hog
- 26. _ __ uproar
- 27. Examine, search
- 28. Basic monetary unit of Greece
- 29. Adjoin
- 32. ___ the season...
- 33. Pineapple fiber
- 34. San Francisco's ___ Tower
- 35. Woody's boy
- 36. Suggestive look
- 38. Liable to be contradicted
- 39. Invitation letters
- 42. To a smaller extent
- 43. Naked-faced Amazon monkey
- 45. Fix, as a shoe
- 46. European name for a moose 47. Actress Davis
- 48. Praying figure
- 49. Big rigs
- 51. Streetcar
- 52. Has a bug
- 53. Not ___ many words
- 54. Describe
- 55. Child support?
- 58. "You've got mail" co.
- 60. LAX posting

MONDAY11.18.13

Israel Centeno Reading and Q & A. Porter Hall A18A. 4:30 p.m.

Venezuelan writer Israel Centeno has been a writer-inresidence at the Pittsburgh branch of City of Asylum since 2011. Centeno will read from *Criaturas de la noche*, his collection of short stories, and his novel, *Bajo las Hojas*. The reading will be presented in Spanish with a bilingual English and Spanish Q & A session to follow.

Movie Screening: Inequality for All.

McConomy Auditorium. 5:15 p.m.

Jacob Kornbluth's documentary *Inequality for All* explores widening income inequality in the United States. In particular, the film focuses on Robert Reich — a professor at the University of California, Berkeley and former Labor Secretary under President Clinton — who has made a lifelong commitment to building a just economy.

School of Architecture Series. Carnegie Lecture Hall. 6:30 p.m.

Witold Rybczynski, professor emeritus at the University of Pennsylvania and award-winning writer on architecture and urbanism, will give a talk titled "How Architecture Works."

WEDNESDAY11.20.13

The Nina Variations. Helen Wayne Rauh Studio Theater, Purnell Center for the Arts. 8 p.m.

The School of Drama presents *The Nina Variations*, Steven Dietz's contemporary interpretation of the final scene between lovers Nina and Treplev in Anton Chekhov's *The Seagull*. Performances will take place Wednesday through Saturday this week. Student discounts are available.

THURSDAY11.21.13

The Curated Arts Experience. Hamburg Hall 1001. Noon.

Ceci Dadisman, director of marketing and public relations at the Palm Beach Opera, will speak as part of the Masters of Arts Management (MAM) Lecture Series. In a talk titled "The Curated Arts Experience," Dadisman will discuss how to harness the intersection of social media and technology with arts experiences to enhance audience engagement.

SATURDAY11.23.13

Bhangra in the Burgh. Soldiers & Sailors Memorial Hall. 6:30 p.m.

The annual bhangra competition comes to Pittsburgh once again for a colorful display of the Punjabi folk dance. Student tickets are \$10.

ONGOING

You Can't Take It With You. Phillip Chosky Theater, Purnell Center for the Arts. Through Saturday. The School of Drama presents You Can't Take It With You, a 1937 Pulitzer-Prize-winning screwball comedy set against the backdrop of the Great Depression and directed by Raymond W. Smith Professor of Drama Barbara MacKenzie-Wood. When two lovers from very different backgrounds introduce their families — one free-spirited and one conservative — a series of hilarious events ensues. Discounts are available for students.

Alien She. Miller Gallery (Purnell Center for the Arts). Through Feb. 16.

This exhibit examines the influence of Riot Grrrl, an underground feminist punk rock movement that surfaced

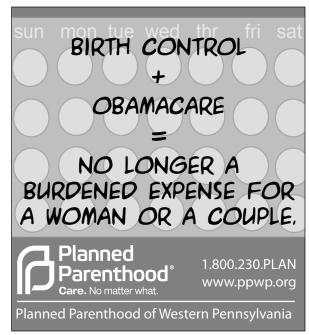
in the '90s, on artists and cultural producers today. For more information, visit *millergallery.cfa.cmu.edu*.

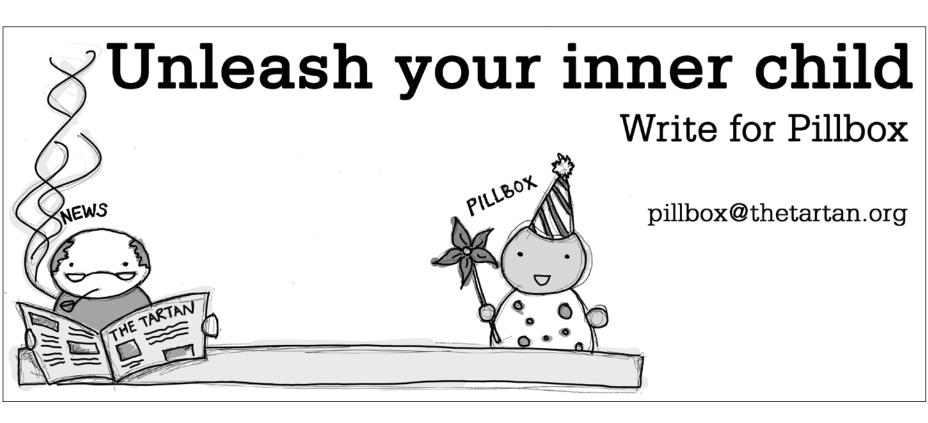
2013 Carnegie International. Carnegie Museum of Art. Through March 16.

The biennial Carnegie International brings the world art scene to Pittsburgh in a large exhibition of diverse works. This year's exhibition features 35 artists and represents 19 countries. For more information, visit *cmoa.org*.

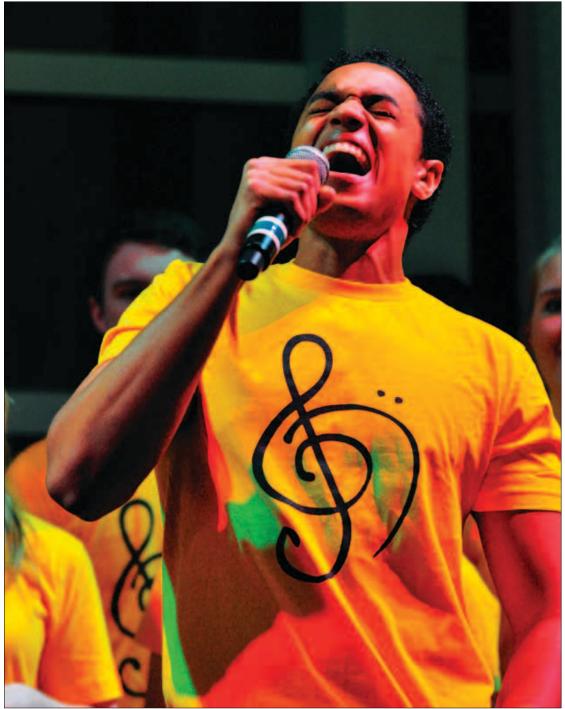
Compiled by **Rachel Cohen** | Pillbox Editor

Want your event here? Email calendar@thetartan.org.





a cappella.



Jacon Chan | Staff Photographor

The Treblemakers, Carnegie Mellon's newest coed a cappella group, performed at Skibo Café on Thursday evening in an event hosted by AB Skibo. Sophomore chemical engineering major Adam Simpson (pictured above) wailed a solo for the audience.